

Wish Ve'd
Known That
Before Vve
Started'
25 Key Tips for
Renovators

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Homes

Conversions
Design Tips
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Windows for Modern Homes BUILDER CONTRACTS Do You Need One?

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Homebuilding & Renovating

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 'We wish we'd known that before we started'

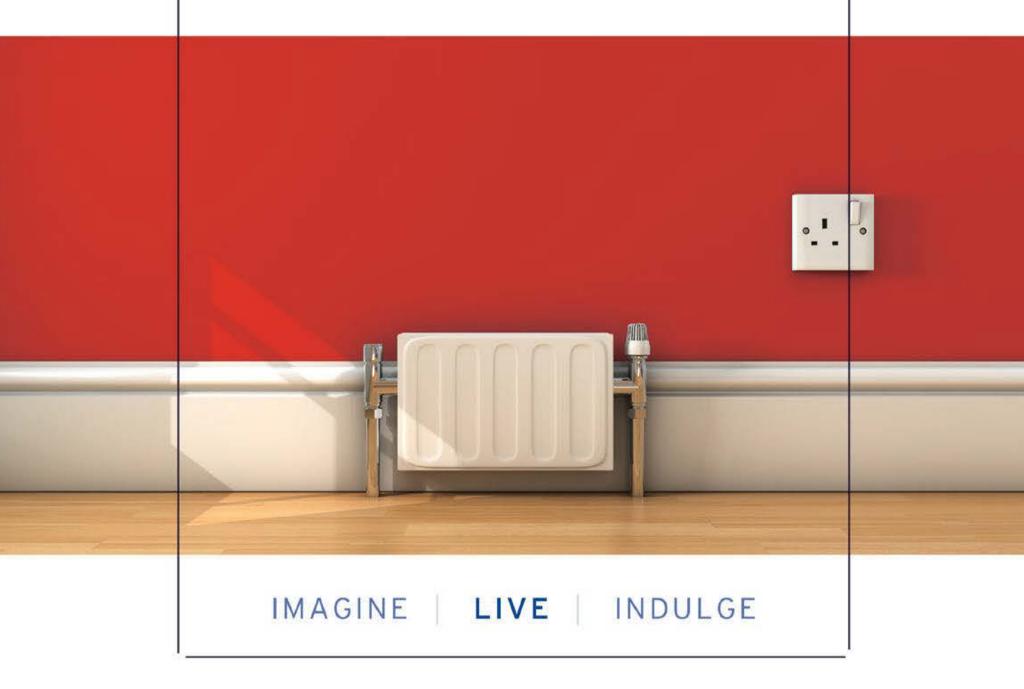
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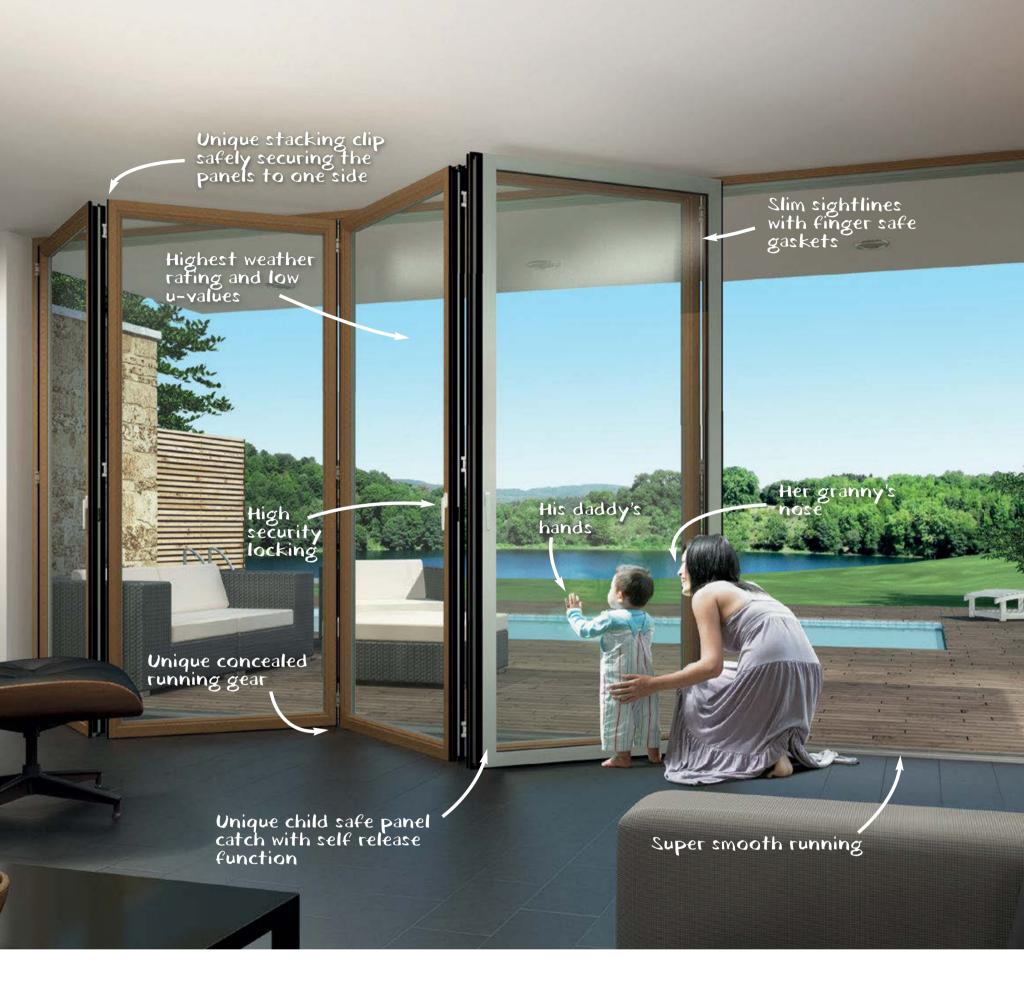
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WELCOME MAY 2015

The Benefit of Hindsight

Jason Orme is the Editor of Homebuilding & Renovating

here is just so much to learn when you're carrying out a self-build or renovation project. New design tips, new products, new rules and, more alarmingly, new ways to manage the build route and, worse, new words — no matter how many times you do it, there is something new to learn. That must be one of its huge appeals (for me, at least) but it also means that if you could apply what you'd learnt at the end of a project to yourself 12 months prior (and no doubt a lot wealthier and younger-looking), then things would be a lot smoother. Luckily (for you) this month we reveal 25 of those 'wish I'd known' tips for renovators (see pg. 102). Elsewhere, more design tips, expert advice and information to help you make the right choices from the off.

Over its 25-year history, I'm only the third Editor of this magazine. The sec-



ond, Michael Holmes, still works on the title among others, and the first, Peter Harris (who established the magazine as *Individual Homes* back in 1990), went on to run the company. We're a tight bunch. So when Peter announced his retirement this morning, just before the issue went to press, I wanted to say that if it weren't for his vision and determination in the early years, *Homebuilding & Renovating* wouldn't exist. Here's wishing him and his wife Judith lots of happy days ahead.

Enjoy the issue.

Jason Orme is currently rebuilding a 1960s house (described as 'Frank Lloyd Wrong' by HB&R's Contributing Editor Mark Brinkley) and is an experienced self-builder and renovator

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DESIGN DIGEST

The latest house design ideas and news from around the world



Above: Extraordinary Exterior

White render, steel and stonework work together to add wowfactor for this home, all reflected by a swimming pool which is visible throughout the property thanks to shards of glass

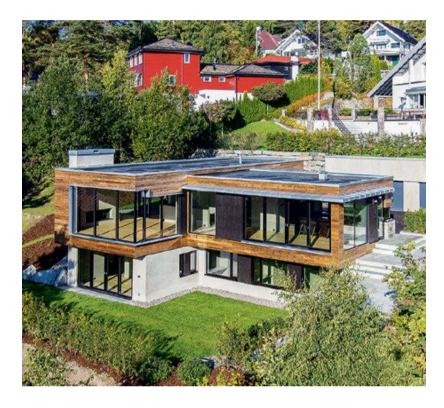


Spanish Statement

Contemporary chic meets European modernism in this project from architect Ramon Esteve. Taking its cue from the Mediterranean environment, the materials specified for this Valencia-based home have been used to reference the pine forest situated on the plot.

The masonry walls have been combined with afrormosia timber framing while weathering steel lattices, working as shutters on the windows and verandas, complete the palette of materials. Keen to offer a high degree of privacy, the house is bordered by stone walls and uses covered verandas to link the interior rooms — which also lend to an indoor/outdoor experience.

Internally, the home is divided into separate volumes including the living space, kitchen/diner, master suite and guest rooms, all of which are visible through structural glazing and offer glimpses of the grounds and pool.



Hillside Haven

Drawing inspiration from its spectacular hillside setting, the latest project from practice LOGG Arkiteker, Villa Melkeveien in Oslo, Norway, works hard to make the most of city views thanks to floor-to-ceiling glazing, while the flat roof structure enables the property to lie low on its plot.

The strikingly modern four-bed villa has been wrapped in horizontal Kebony cladding – chosen for its hardwearing and sustainability qualities – glass, stone, slate and render to blend in with its surroundings, and consists of two main blocks in a T-shape formation, occupying an impressive 300m².

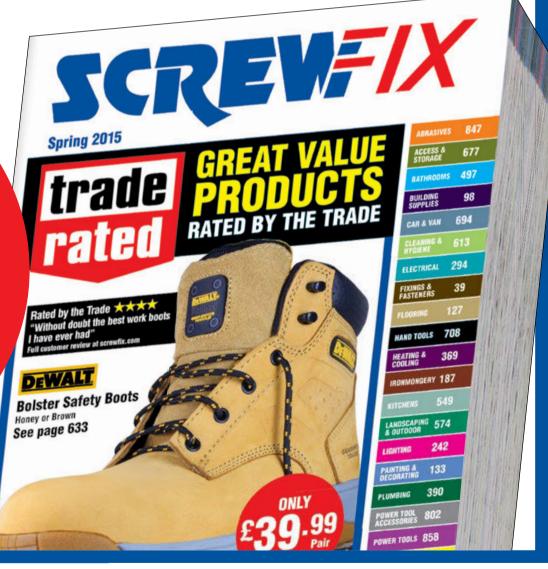
Orientated to capture the views, the interior features a large lounge and kitchen which has direct access to a terrace. Additional luxuries include a spa room along with a separate guest area with its own kitchen and bathroom.











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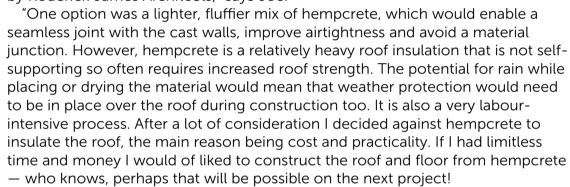
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"The Material Details Have Taken a lot of Thought"

We catch up with self-builder Joe Shimbart, who's planning to build an energy-efficient oak framed house in Hampshire using natural building materials

"I've recently been deciding on roof insulation, which has remained an area of debate and uncertainty, and the material details have taken a lot of hard work and thought by Roderick James Architects," says Joe.



"I knew that an alternative breathable warm roof construction was needed. In the end, the favoured option was to use flexible wood fibre batt insulation with an insulated sarking board over the rafters. Sheep's wool insulation was also considered for its similar performance, but I preferred the enhanced anti-sag characteristics of wood fibre and its higher thermal mass.

"Another interesting product that will be used is wood wool board, which will take the place of plasterboard in the ceilings and stud walls. The boards are made of wood fibre bound with Portland cement and offer many useful qualities that will fit well into the build. They offer some insulation too, along with excellent fire resistance and good acoustic qualities. Crucially they are also breathable. All of these considerations have certainly brought a technical interest to the project that I had not really expected.

"All I'm waiting on now is for my sewer diversion and planning condition to be approved and I'm ready to build my house — and I'm going to start soon." For more updates on Joe's project, visit homebuilding.co.uk/classof14

HB&R's Facebook Talks On-Site Issues

Staggering before and afters, self-build advice, and news on Boris Johnson's support of self-build initiatives in London, it's all been happening over on HB&R's social media. When sharing our advice on Facebook this month on how to cope with an extension project, we asked what the worst thing was about living on site during home improvement works. Zoe Robson said: "Dust." While Penny Tingey said: "Lack of water, without question. Anything else you can get around, but the days without water were the worst." Want to talk about your project? We'd love to hear from you. Find us on social media at homebuilding.co.uk/social-media



Your Views

Foundation Risks

I was reading a copy of the April 2015 issue of HB&R while on holiday and was surprised to see a letter from a reader who had poured a concrete strip foundation for an extension next to his neighbour's leylandii trees. He mentioned that he had to break it out to install a deeper foundation following a report from a structural engineer and as requested by Building Control.

The reader seemed to think that the leylandii trees were of low risk to his foundations and the exercise had been unnecessary and costly. However, I'm a structural engineer with nearly 30 years experience and can assure your reader that leylandii trees in close proximity to a foundation in clay soil presents a high risk of subsidence and heave.

I would suggest that the greatest risk to a project budget is the client not getting advice at an early stage (preferably before pouring concrete).

Karen Nolloth, Bedfordshire

Regulation Concerns

If the proposed changes to the CDM (Construction Design and Management) regulations come into force as planned on 6 April, what is it going to mean in practice for self-builders? On the Construction Industry Training Board's website there are draft guidance documents describing each of the roles under CDM 2015, but one that doesn't seem to be there yet is the one for domestic clients. From what I can gather, the domestic client can pass on his/her duties to the principal designer, but who that would be?

Lynden Potter, via email

Editor replies: We're still trying to work it out... look out for a full guide over the next month or two.

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UPFRONT

MATERIALS

Latest looks for finishes and fittings



SogoSolar's Solar Panel and Velux Window System

Offering a solution to save on energy bills while allowing light into loft rooms, this off-the-shelf system from SogoSolar combines Velux windows integrated with a unit of solar panels which sit flush with surrounding roof tiles. POA.



Arabescato Marble Surface from J. Rotherham

Perfect for cladding the walls and floor of your bathroom, J. Rotherham's Arabescato bookmatched marble offers a polished finish which accents the material's natural veining and textural variations. The slabs can be cut to bespoke sizes too. POA.



FINITE Fire-Rated Doors from IQ Glass

The new FINITE doors from IQ Glass feature a frameless glass surround and flush base for a minimalist style. The firerated doors also feature handles that are bonded to the glass for a neat finish. POA.



SieMatic's URBAN Lifestyle Kitchen Concept

Breaking free from the traditional kitchen ranges, the new URBAN lifestyle kitchen from SieMatic offers a new concept on freestanding islands, sideboards and units. The range is available in varying heights to add contrast, as well as different wood finishes and over 1,950 colours from SieMatic's ColourSystem. POA.

Panasonic and Generaytor's 'Virtual Solar' Platform

The new 'Virtual Solar' simulator from Panasonic Eco Solutions and Generaytor offers users a try-before-you-buy virtual experience to estimate how much of their day-to-day needs can be powered by a solar system, the financial earnings they can expect from Panasonic solar modules, and the investment required based on local community knowledge. POA.



Top Three Sockets





2



- **1.** Jim Lawrence's 2-Gang beeswax plate socket with steel switches costs £42.90;
- **2.** The multi-purpose Kitchen Pop-Up Socket with USBs from John Lewis costs £175;
- **3.** The handy brushed steel 45A cooker switch and 13A socket from Wickes costs £19.49.



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UPFRONT

THE LATEST

Events, news, tips and ephemera





Living Large in the World's Smallest Homes

If the TV programme *Tiny House Nation* (currently airing on Channel 4) is anything to go by, homeowners love small houses. And it seems the trend has taken off on a global scale, particularly in countries and regions where plots are few and far between.

Japan is a prime example of a country rife with overcrowding and, keen to offer a solution, architect Kota Mizuishi from Mizuishi Architect Atelier has created an astonishing super-slim, two storey riverside home (ABOVE LEFT) complete with open plan kitchen/dining/living space, two bedrooms, bathroom and playroom all within 55m².

Meanwhile across the pond in north-east Washington DC, homeowner Jay Austin, with a little help from his friends, managed to successfully build his own tiny timber-clad home (ABOVE RIGHT). Titled 'Matchbox House', the 2.2x5.8m home packs in a living room, kitchen, utility and bathroom on the ground floor with a bedroom accessed via a ladder above. Impressively, the home is also self-sufficient, with solar panels generating electricity and a rainwater harvester providing water for the shower and sinks which can be reused.

Cornwall Council Grants Approval for New Custom Build Plots

Carillion-Igloo and Coastline Housing have gained approval to build 144 homes at Trevenson Park, beside the Heartlands regeneration project in the village of Pool, Cornwall. The plans approved include 54 custom build plots at Trevenson Park — now one of England's largest dedicated custom build sites.

The development, which begins construction later this year, will offer people from the Cornish community the chance to design and build their dream home with the help of a company chosen from Carillion-Igloo's specialist panel. Coastline Housing will also develop 90 new affordable homes, including a block of 23 flats for older people in the local community.

Trevenson Park is one of the Homes and Communities Agency's largest custom build projects set up by the Government to boost housebuilding, and has been adapted from the Dutch custom build model in Almere, which showcases the cost-effectiveness and increased sustainability that custom build schemes have to offer.

In addition to the benefits for homeowners, this new development is also set to create around 200 full-time jobs for the construction industry, with the majority of the work going to tradespeople in Cornwall.



See a Self-build Come to Life

Ever fancied seeing how a real home is built, step-by-step? Potton's Self Build Live initiative helps would-be self-builders do exactly that, with a series of events throughout the year following the construction of a PassivHaus show home at the company's Cambridgeshire HQ.

"We are really excited to launch Self Build Live as it's the first event of its kind," says Potton's Fae Perkins. "We offer various events and courses through our Self Build Acad-

emy® but this event is unique in that it allows aspiring self-builders to revisit at each stage, allowing them to truly experience how a self-build would come together. We will slow the build programme down over a 12-month period to allow visitors to access the project from groundworks through to finishing touches. Our mission is to educate and inspire the next generation of self-builders." selfbuildacademy.co.uk/live •



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This section: Everything you need to create a brilliant individual home — from ideas, expert guides and designers' advice to other people's inspiring projects



Homes

A Modern Highlands Home P.42



Homes:

A Brilliant Barn Conversion P.60



Designer's View:

Extending a Bungalow P.74

Plus: → A Traditional Oak Frame Build P.22

- **➡ Designing a Utility Room** P.39
- Tontemporary Window Ideas P.70
- **➡ Shower Enclosures** P.80



Project: Oak frame self-build

Location:

Hertfordshire border

Dates: May 2012 - Feb 2013

Size: 314m²

Land cost:

Build cost:

£575,000 $(£1,831/m^2)$

Value: Unknown

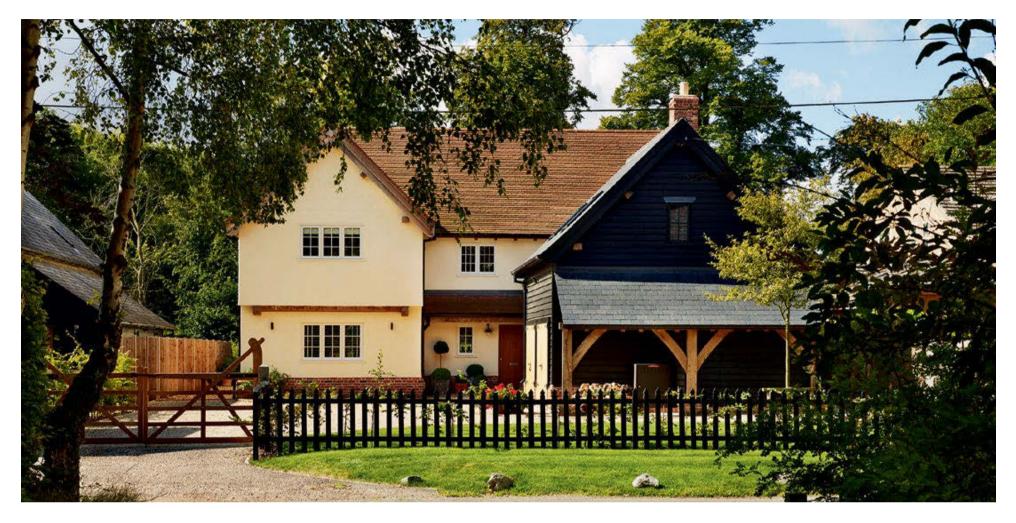


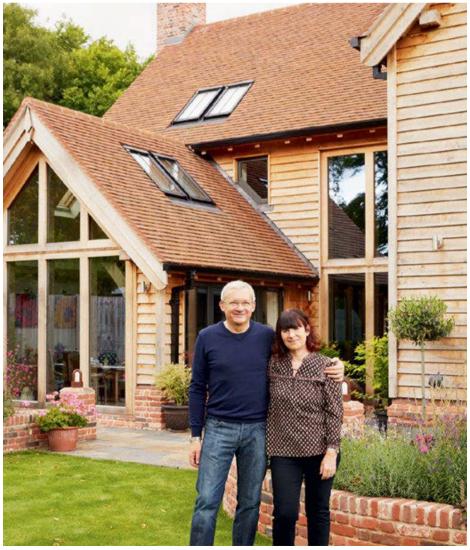
When Alison Farrell-Price finally found her perfect rural plot, she didn't just build one house, but two — the first being the ideal sounding board for this, her forever home

Words: Karen Darlow Photography: Darren Chung



HOMES OAK FRAME SELF-BUILD





THE QUICK READ

- ➡ Alison Farrell-Price undertook two self-builds with husband Chris Price — the first was a barn-style oak frame house, which provided comfortable accommodation during this build
- >>> The piled foundations and concrete rafts for both houses were completed at the same time, providing cost savings
- Alison acted as project manager, hiring Westwind Oak to provide the oak frame; the result is a home that combines the best of period detailing with open plan modern living

here are difficult second books and albums – authors famously battle to put them into words, musicians struggle to hit the right note – but for Alison Farrell-Price and husband Chris Price, their second self-build home was a breeze compared with the first.

For one thing, all the groundworks had already been completed as the new house sits next to the oak frame barn Alison built back in 2010. She learned a lot during that first build; lessons she couldn't wait to put into practice with a second oak frame house, this time a much larger farmhouse-style building.

Thinking back to when she found the plot, Alison, a business development consultant for an IT software company, couldn't believe her luck. "I'd spent three years searching online and with land agents, and eventually found this plot advertised in a free local newspaper," she says. "It was perfect — in a pretty village, on a quiet road, with a south-west-facing garden and views over parkland at the back."





Gaining Planning Approval for Two Homes

The plot is in a Conservation Area, but planning permission was already in place for the existing house to be demolished and for the land to be split in half, with approval for two new houses. Alison reapplied to split the land one third/two thirds and submitted plans for two carefully detailed period-style properties. The scheme was designed to emulate a Tudor farmhouse - the couple's eventual home - with a black weatherboarded barn (which was to be their first self-build) alongside it.

"I used designer Pete Tonks, who did the plans for our barn, to do the drawings for the second house to get us through planning," says Alison. "Conservation officers often prefer artistic hand-drawn elevations to show how a finished building will look and how it will sit in the street scene — difficult to achieve with a CAD drawing.

"I also held a meeting in the village hall so that everyone had a chance to see our proposals," she adds. "We had unanimous support from the local residents because our plans were more in keeping with the historic village setting than the designs that had been previously approved." The planning department agreed and permission for the scheme was granted.

Next followed an arduous excavation of the plot. The ground was in a very poor state as the previous owners had planted numerous

conifers on the site which possessed unstable clay soil. Alison called in a structural engineer, who advised that the whole site should be dug out and piled, with concrete rafts constructed to form the foundations for the two houses.

By the time building began on the second house, however, all those days spent knee-deep in mud on a very boggy, rain-soaked site, were distant memories. Alison and Chris were living in the completed oak frame barn, so keeping an eye on the build was much easier second time around. "Project management is definitely a full-time job. If you're buying every single screw and every timber, which I did, and only using subcontractors, you need to be there all the time," says Alison.

Taking on the Role of Project Manager

In addition to living next to the site, another valuable lesson Alison learned from the first build was that in order to project manage effectively, you need to know how your build fits together from the start. "The best thing I did was sit down with the architectural technologist who did my building drawings and work through them all on a computer," she says. "If you do that, then not only do you begin to understand the construction of the building, but have a direct input into it; this enables you to see where the likely issues



HOMES OAK FRAME SELF-BUILD

Left: Kitchen

Wall units have been kept to a minimum to allow the oak frame to be exposed (instead a kitchen island and plentiful base units, from Howdens, provide ample storage). The neutral room has been injected with colour thanks to bold blue accessories and another eyecatching focal $\mathsf{point}-\mathsf{the}$ Lacanche range



Positioned in the centre of the house, the dining hall features an impressive glazed bridge beneath vaulted ceilings, and full-height glazing. A cosier living room (BELOW) leads off this space









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HOMES OAK FRAME SELF-BUILD



are going to be and to consider how you are going to resolve them. It also helps when you to come to schedule the work."

Working through the drawings with the architectural technologist helped in other ways, too, as Alison explains: "It's an essential way of making sure you have allowed enough contingency. I'd say you need 20 per cent contingency. With one-off oak frame houses in particular, you do need to allow enough in the budget as they're slightly less predictable than more conventional builds.

"With a project like this, you also have to be able to envisage the finished product. You can't afford to change your mind, because that costs money," she advises. Everything was planned upfront, from the Lutron lighting system – with the exact positions for all the lights plotted before the build started; the main area where husband Chris got involved – right through to designing the oak frame in the kitchen specifically to accommodate the Lacanche range cooker.

But despite all the forward planning and visualisation, nothing can quite prepare for the excitement of the frame going up: "Watching your frame arrive on the back of a lorry and seeing it go up, that's a key moment," says Alison of the frame, which was provided by Westwind Oak. (Structural insulated panels encase the frame for an airtight finish). "If you imagine, in just four days the frame is erected and the form of the house is created where there was previously just foundations. But then you've got another 10 months after that before you can actually move in."

Above: Garden Room

The vaulted space is filled with natural light thanks to a glazed gable end and a set of bi-fold doors (note that the internal finish of the doors complements the oak frame); the latter open up to a courtyard patio. This room is open to the living room — providing one large entertaining space when required. However, changes in ceiling height help zone these two areas, defining their intended functions





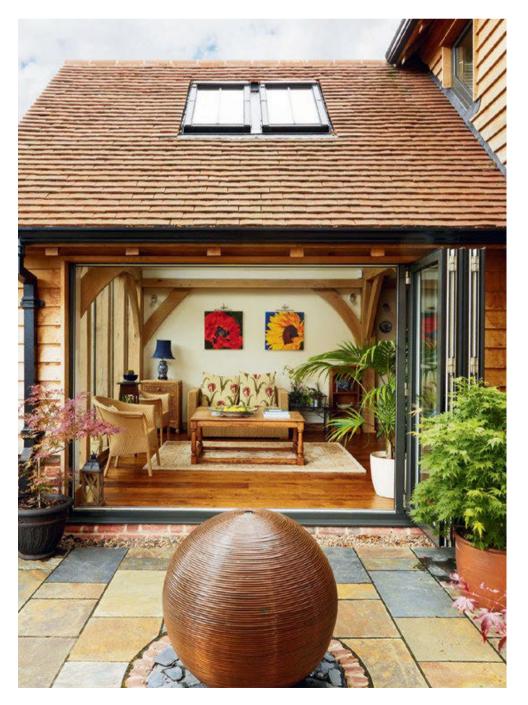
HOMES OAK FRAME SELF-BUILD

Marrying Period Details with Modern Living

During those 10 months, the house slowly took shape using traditional materials, such as handmade clay tiles, oak fascias and rafters, lime render and bricks laid in a Flemish bond with lime mortar. The front of the house also features an oak jetty, as well as pargeting; the latter being a traditional decorative plasterwork. Great attention was paid to the period detail to fit in with properties in the area, and Alison even obtained Building Control approval to set the windows further forward than would normally be permissible, in order to emulate the period look.

Inside, the aim was to create a space flooded with light and to maximise the rural views. Within a largely open plan design, the oak frame has been adapted and used to divide the space into separate rooms, each with a distinct feel and function.

The centrepiece of the finished home is undoubtedly the dining hall, vaulted up to the roof with oak rafters. A laminated glass bridge with glazed balustrade crosses the centre of the dining hall. The near-transparent material allows light to pass through the structure and ensures that the room and the view beyond aren't bisected. In the living room, a magnificent Bathstone fireplace has been custom





made, making a real feature of the Clearview stove. Together with the lower ceiling and traditional exposed ceiling joists, it makes for a cosy space on winter evenings.

Alison finds it hard to choose her favourite room: "I like the dining hall, the living room and the garden room for different reasons," she says. "The dining hall is where everyone congregates and is the heart of the house. The living room and the garden room aren't particularly big on their own, but if you combine them, they make a big entertaining space that's lovely for parties."

So with that difficult second build behind her, are there any plans for a third? "I'd do another oak frame house tomorrow," says Alison. "Not to live in, because I don't ever want to move from here, but I'd build another to sell on. It's just such an amazing process."

>>>

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HOMES OAK FRAME SELF-BUILD

The Project

THE HOMEOWNER'S VIEW



Alison Farrell-Price and Chris Price Homeowners

The layout works brilliantly for us. The ground floor is open plan, with spaces subdivided by glazed walls and half partitions, meaning that all the rooms are segregated but remain connected. It also means the house does not feel too large for two people, but still makes for a great entertaining space for our friends and family. When we designed the oak frame, we used it to create a different look and feel to each room, and this has worked extremely well — from the cosy sitting room with its fireplace and oak joists to the light, airy garden room with its vaulted ceiling and glaz-

ing, the double-height vaulted dining hall, and the more contemporary and simple frame in the kitchen/family room space.

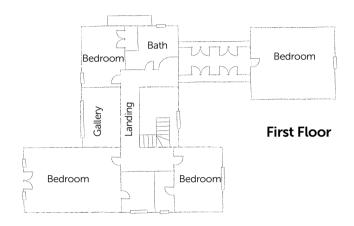
THE DESIGNER'S VIEW

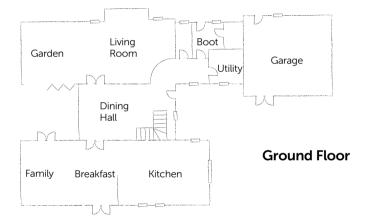


Pete Tonks Architectural designer

Alison and Chris wanted a big-house feel to a design that had to be 14.5m wide due to plot constraints. We always see a constraint as an opportunity and, from reviewing the brief, it became apparent that a central core approach could be taken, with the various living and activity spaces 'branching' out. They also had a vision of a relaxed, informal entry that has natural flow forwards into the dining hallway. This is a relatively traditional approach, but we decided to amplify the experience by

making this central core full-height vaulted, and adding in a staircase with bridge landing to connect the two wings of the house.





BUILD TIME

Mar 09 Plot purchased

Sep 09 Planning permission approved for both houses

Oct 09 Work started on site, including demolition of old house

Jan 10 Piled foundations and concrete raft completed

Jul 10 First self-build draws to an end

May 12 Oak frame arrives for second self-build

Feb 13 Second build complete

SUPPLIERS

Oak frame Westwind Oak		
Architectural designer Pete Tonks of PJT Design		
01480 414580		
Architectural technologist Mark Rummings of The Architectural		
Studio		
Oak framed glazing Black Pig Frame Finishing08716 616573		
Windows and doors Admiral Homespace01480 456789		
George Barnsdale01775 823000		
Handmade Bathstone fireplace Finesse Fireplaces.01225 783558		

Clearview woodburning stove Ivett & Reed	01223 213500	
Stone flooring and tiles Floors of Stone	01509 234000	
Antiqued oak flooring Machells	0113 250 5043	
General building materials Direct 2 Site	01480 213251	
Kitchen, utility and boot room Howdens Joinery . howdens.com		
Range cooker Lacanche	lacanche.co.uk	
Granite worktops Quince Stoneworks	01767 314180	
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Floor tiles Pentagon Tiles	020 7490 2070	

⋙ →



HOMES OAK FRAME SELF-BUILD

Adding Glazing to Oak Frame Homes

Green oak and glass are not natural bedfellows, but could face-applied glazing provide the perfect solution? Karen Darlow investigates



he recent resurgence of interest in green oak frame buildings has brought with it some particular challenges — not least of which is how to fit inflexible glass windows into an oak frame that will be slowly drying out over the course of around 10 years. This has been made all the more difficult by our modernday predilection towards introducing large expanses of glazing.

This issue has, however, been addressed in Alison Farrell-Price's oak frame house, which features fixed-panel glazing by Black Pig, a specialist carpentry business entirely devoted to green oak timber frames. Black Pig's take on face-applied glazing involves cladding the entire structural frame to protect it and to provide a waterproof seal. The insulated glass units (IGUs) 'float' over the external frame, using a covering strip of oak on the outside of the glazing, exactly in line with the frame. That way, as the green oak frame shrinks and seasons over the years, the glass remains in place. Weather seals are made of EPDM rubber, giving longevity and allowing movement, and no silicon or other mastics are used as these can degrade or tear over time. Drainage is also built into the Black Pig system to extend the life of the IGUs.

In the words of Black Pig's founder and managing director, Simon Ely: "We want our work to complement your oak frame, while retaining the option of relatively straightforward repair or modification so that our work will last as long as your green oak frame." It's worth bearing in mind that, unlike 'standard' off-theshelf windows, companies such as Black Pig are best contacted early on in proceedings - as early as the design stage - and that they not only supply the system, but their specialist team of carpenters also install the product on site.

A further, very considerable, advantage of fixed-panel glazing for these magnificent timber framed windows is that the entire oak frame is visible from the inside, uncluttered by additional joinery or sealants. Put an extra window frame in there and the impact of the most important aspect of the whole build - the oak frame and your view through the window – could be ruined. $oldsymbol{\Theta}$

MORE OAK FRAME HOMES ONLINE **■→ A Guide to Oak Frame ■→ Oak Frame FAQs** Visit homebuilding.co.uk/oak-frame



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Castle Ring Oak Frame

This oak frame home clad in larch has rural charm — and was built for under £100,000



WSM Architects

This European-style home is proof that an oak frame can take a contemporary form



Self-designed

Fairytales come to life in this inspired home; the oak frame was sourced from France



The Complete Oak Home

A range of materials including oak cladding, flint and brick provide texture and warmth



Border Oak

This barn-style self-build features painted blue softwood cladding to great effect



Carpenter Oak & Woodland

Clad in Cotswold stone, you'd never guess an oak frame sits behind this eco self-build



Border Oak

Lime render, a brick plinth and clay tiles create a timeless cottage style



Mathewson Waters Architects

Behind this Cotswold stone-clad façade lies a vaulted oak frame



Welsh Oak Frame

Terraces and balconies allow this modern oak frame home to bring the outside in



Stephen Evans Associates

Large gables offer strong lines (and a sheltered veranda) on this oak frame build



Oakwrights

Gables and an exposed oak frame add to the authenticity of this grand self-build



Carpenter Oak & Woodland

This quirky design clad in timber and stone is also a highly sustainable home



Oakwrights

Decked terraces provide the perfect outlook point from this oak frame lakehouse



Roderick James and Carpenter Oak

Overhanging eaves and a low slate roof add interest to this new home



Welsh Oak Frame

The double-height glazed gable of this oak frame home takes in the views



Westwind Oak

Arts & Crafts meets barn style in this oak frame home designed by Huw Thomas



Self-designed

A colonial cricket pavilion-style oak frame home sits proudly on the River Thames



Border Oak

A traditional oak frame meets modern open plan spaces in this double-gabled property



The Complete Oak Home

Vertical cladding, a zinc roof and aluminium windows make this oak home modern

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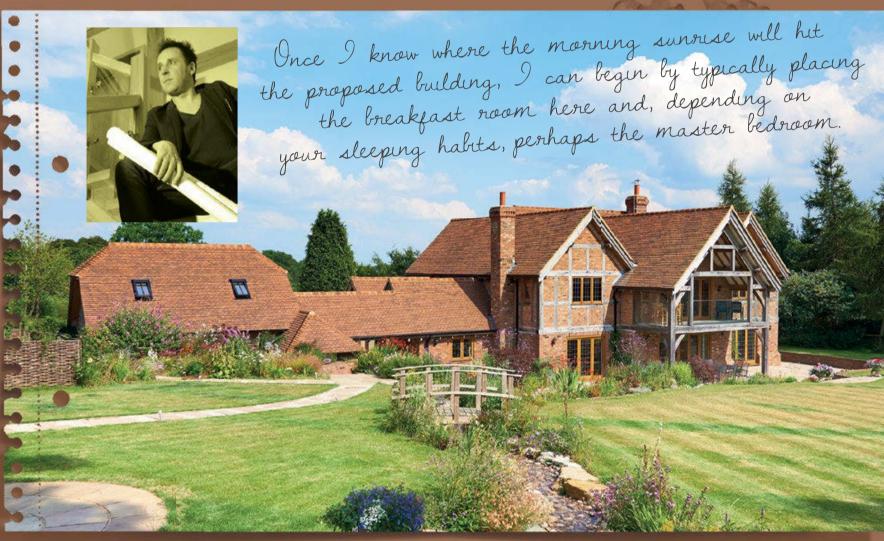
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INTERIOR ARCHITECTURE

Getting Utility Rooms Right

Utility rooms have to do many different things — for most, they are a laundry, plant room and boot space in one. Natasha Brinsmead explains the design essentials







Utility rooms are noisy places when in full swing — being home to tumble dryers, washing machines and the like. For this reason, locating them away from your relaxation and dining spaces, and not directly beneath nurseries or children's bedrooms, makes sense — although if this can't be avoided, opt for noise-reducing appliances. If you have a cellar or basement, these make ideal spots for locating utility rooms, although near a back door, off the hallway or next to a kitchen all make sense too.

Plan the space out properly. You will need to make sure you have a hot and cold water supply and waste for the sink and washing machine. You also need to bear in mind that if you have a vented tumble dryer you will need somewhere for it to vent to. Give thought to shelving and units and try to squeeze in some space for drying clothes — a pulley-style dryer that can be hoisted to the ceiling is a good option for those limited on floor space. If you do not have window to the exterior, plan in an extractor.

MAGES:ISTOCK (BOTTOM LEFT); JEREMY PHILLIPS (TOP LEFT); IKEA (MAIN)

>>> Designers on Utility Rooms



Darren Bray is associate director of award-winning practice PAD Studio (padstudio.co.uk)

"They're Becoming Mini Kitchens"

The contemporary utility room is one of the key main spaces of any new home; it can be seen as the workhorse of a house. The utility is that space that hides all the necessary essentials — laundry, boots, kitchen overflow and storage.

With the kitchen becoming an ever-more minimal space, the utility is now more of a kitchen overflow. Many of the recent utility rooms we have designed are sited directly behind kitchens, so that you can reduce kitchen cupboards and storage in the kitchen and replace them simply with streamline base units beneath worktops.

One utility we recently designed has the same finish and specification as the kitchen, with polished concrete floors and beautiful exposed birch ply shelves. Utilities are almost becoming mini kitchens with sinks, washing machines, dryers, food storage, large freezers and even space for the wet dog.

It is key that these spaces have plenty of cupboards, preparation areas and general storage. Include good natural daylight and access to the outside areas too, where practical.





Tony Holt is an architectural designer and chartered architectural technologist, specialising in bespoke property design (tonyholt-design. co.uk)

"Think Carefully on Location"

Do you want a utility room or a laundry room? This is what I normally ask my clients before deciding on where this room should be located. A utility room is often thought of as an extension of the kitchen. Mass housebuilders incorporate this room by dividing off a section of the kitchen (making the kitchen smaller) in order to have this room listed on the sales brochure.

We've generally been conditioned into thinking this room should be accessed through the kitchen space but often, after a discussion of how they are going to use the space, my clients opt to have a laundry room on the first floor, which would be for washing and drying clothes and also contain storage areas for linen. I often ask the question: 'why would you take your dirty laundry downstairs to wash, dry and iron, just to take it back upstairs?' If, however, the household routine needs to allow for drying clothes outside then the best place for the laundry room tends to be on the ground floor.

A common debate is often had on the need to have laundry next to and accessed through the kitchen, which comes from the mass housebuilding approach. It does make sense to centralise drainage and water supply, but usually the connecting door between the kitchen and utility room breaks the worktop and creates unnecessary circulation.

It's usually much more space-efficient to have a laundry room accessed directly from the hallway, close to the staircase, so clothes and linen can be transported without going through the kitchen — this can still be located adjacent to the kitchen to keep drainage and water supply in one location.

As the utility room is not classed as a habitable room, there is no requirement for openable windows.











Above: Multi-Purpose Space

Tall units are ideal for providing plentiful storage in the utility — taking the pressure off the main kitchen. A utility could even double as a home office, or a home for the dog bed. Handcrafted cabinetry in limewood here is by Barnes of Ashburton



Work out how much space you'll need for the room to function well. In general, washing machines need around 920mm of space in front for loading and unloading. Most washing machines measure 600x540mm deep and tend to be around 850mm high — give or take a few metres here and there. If you are short on floor space, stacking a washing machine and dryer is a good idea.

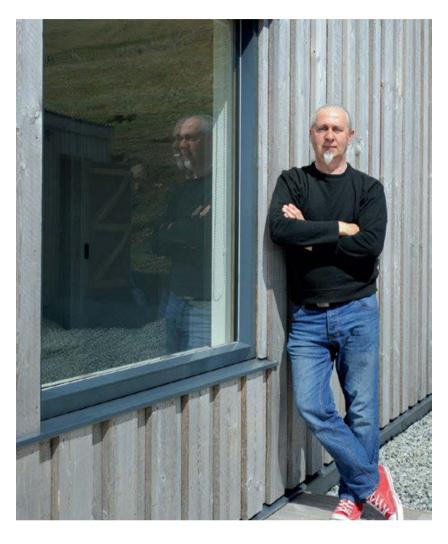
Think practically at all times. Choose a deep, sturdy sink capable of washing off muddy boots and pet bowls, opt for tiled floors that are easy to mop, and low-maintenance worksurfaces that will withstand spills. If you have children, also make sure you include a lockable cupboard for chemical-based cleaners. $oldsymbol{\Theta}$

MORE ROOM PLANNING IDEAS **■→ Planning a Kitchen** Visit homebuilding.co.uk/rooms





HOMES CONTEMPORARY-STYLE SELF-BUILD



THE QUICK READ

- ➡ Nigel and Elaine have self-built a contemporary cabinstyle home on the Isle of Skye for just £125,000
- ➡→ As the new build is being used as a holiday let for much of the year, Nigel and Elaine were unable to reclaim their VAT on the project
- **>>>** Despite its large plot, light, open interiors and vaulted ceilings, the property is modestly scaled at just 95m²

s far as building on a budget goes, it would be a hefty feat to find a self-built home as impressive as the one created by Nigel Rigden and his partner Elaine Mead on the Isle of Skye — not least because of its awe-inspiring views over a 650-acre croft. It's hard to believe then that this Scandinavian-inspired home started out as such an unappealing site that Elaine wouldn't even get out of the car.

"I've always wanted to build my own place," begins Nigel, "and so after losing out on a renovation project I decided to start looking for a plot. When we first went to look at the site it was full of rubbish and you couldn't really see the views. I thought it wasn't as bad as it looked and to our surprise, when we put an offer in the estate agents had got the size of the plot wrong — the price actually included three times the size in hectares!"







Above: Open Plan Living

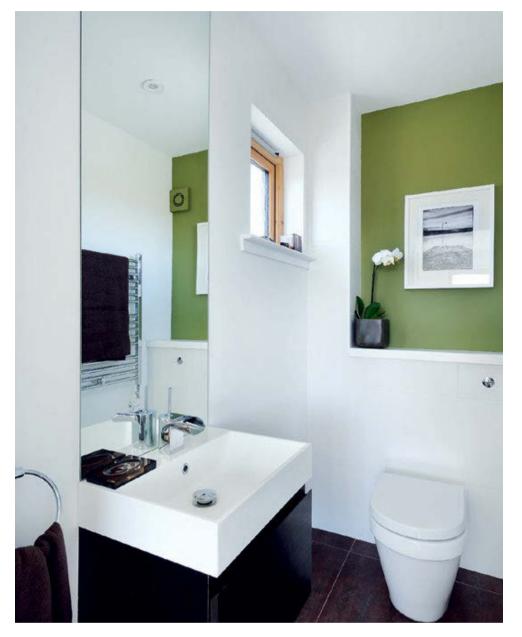
A neutral palette and double-height volume allows the open plan kitchen/ living/dining space to appear larger in scale. White oak flooring from Factory Direct Flooring has been laid across the length of the room, making the space appear longer. The kitchen units from Howdens Joinery sit beneath a large linear window allowing light to reach the back of the home, while a picture window opposite offers a dual aspect



Both bathrooms remain in keeping with the home's contemporary style with the sanitaryware specified from Bathstore. The bathrooms are finished in ceramic tiles from Topps Tiles with underfloor heating beneath



HOMES CONTEMPORARY-STYLE SELF-BUILD





Scandinavian-Style Design

"I liked the idea of building a kit home and wanted it to resemble a contemporary Scandinavian-style cabin," says Nigel, "but when I sat down with my architect Billy Reynolds he said that he could design and build this style of house for the same price. We were lucky that Skye is pretty forward-thinking architecturally — they're so used to seeing contemporary things, and with this project we were really putting something back into the island."

The project was put out to tender with different builders but when all of the prices came back over budget, the couple had to rethink. With this being a timber frame build, the joiner was to play a large role in the construction, and so the couple sat down with their joiner who went through the tender document to see what additional work he could take on to get the budget down.

Work started on site in June 2011 with the timber frame going up within a week in September 2011. Keen to reflect the charm of a rural cabin, the decision was made to clad the exterior in untreated seasoned Siberian larch which will weather to a silver grey, complete with a tin roof, while carefully positioned glazing breaks up the timber panels to capture the views over the glen at Glenmore, the river and the mountain range beyond.

Nigel and Elaine also aimed to keep the interiors fairly simple, and splashes of colour now draw interest against the predominantly

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HOMES CONTEMPORARY-STYLE SELF-BUILD

white scheme. Privacy was another consideration and the layout has been carefully planned so that the two bedrooms are located at opposite ends of the living space with access to separate bathrooms (one is an en suite). "For the main living room I wanted this area to feel reasonable in size, even though the home is a modest 95m², and so we opened this space up to the roof to make it double height," continues Nigel. Picture windows and white oak flooring add to the contemporary feel of this space.

In order to keep the home warm – a priority considering its northerly location – extra insulation has been packed into the walls (far more than Building Regulations require) and provisions made so that solar panels can be added at a later date. A woodburning stove in the living space provides a heat source, however the home is mostly kept warm from receiving a lot of solar gain in the winter from the low sun. The bathrooms benefit from underfloor heating too. Between the bathrooms and bedrooms there is also a double layer of plasterboard — although this is mostly for soundproofing.

A Home for Holidays

"We had always built the home for ourselves, but we now let it out throughout the year to help run it," explains Nigel. "Unfortunately we fell foul of a problem claiming back our VAT and it turned out that because we had mentioned about letting it out beforehand we were unable to claim anything back."

While the couple envisioned that the property would be let out, they still designed it to their taste, but were strict on only buying sale items, spending no more than 50 per cent — except on the sofas and beds. "We trusted that if we put quality things into the home that people would look after it," says Nigel. "There's much more demand for high-quality self-catering accommodation nowadays and this is perhaps why the home has been so popular — we get bookings throughout the year! When we retire we will build another place on Skye and live here while we do it. We'll then let it out again."

The Rewards of Self-building

Indeed, Nigel was not one to sit back and let others take on the work. "I was determined to roll my sleeves up and get involved," he confesses. "I didn't want to just buy the plot and throw some money at it for someone else to do it — although there was one stage of the decorating process where I spent an entire weekend in a wardrobe painting; that was a low point! I think that it having turned out better than we thought, and just having something you've imagined in your mind and wanted for so long to finally come through is just a great experience. You soon forget afterwards all of the trouble you went through when you're enjoying it at the end.

"I still look at it and think I can't believe we've got this, especially seeing as we bought it before we even realised we had these great views," concludes Nigel. "It's so peaceful and it's a great place to unwind, which was the whole idea. If you do this sort of thing you either think at the end 'I never want to do that again' or you finish and can't wait to start on the next. I want to do another one now!"

FIND OUT MORE OVER THE PAGE

- **■→ Project Details**
- >>> The Challenges of Building a Holiday Home





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HOMES CONTEMPORARY-STYLE SELF-BUILD

The Project

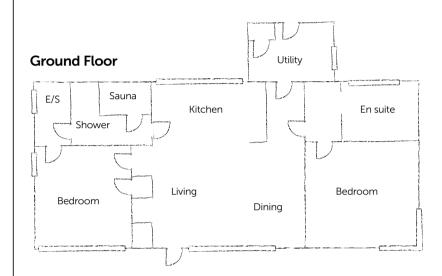


Nigel Rigden Homeowner

THE HOMEOWNER'S VIEW

To begin, there's an entrance lobby at the back to keep the utilities, coats and storage separate — anyone who lives up here will know how necessary a boot room is when you come in from a day outside. You then come through to the main living/kitchen/dining area which has been opened up into the roof to create a feeling of space, which has succeeded in making the home feel much larger than it is. A small half wall to one side of the kitchen has been put in to give a reveal here, as well as an anchoring point for the lighting across the kitchen. A woodburning stove helps to zone the living space and the large picture window brings in plenty of light and warmth from the winter sun, as well as the views over the croft.

One of the key considerations when planning the layout of the home was for the bedroom spaces to be private if there were two couples staying. To one end of the home, a bathroom is carefully orientated so you can't see directly into the one bedroom from the kitchen, and to the opposite end of the living space is the second bedroom which leads through to an en suite featuring a toilet and basin. A separate shower room can be accessed via the en suite as well as off the kitchen for multi-purpose use.



BUILD TIME	SELECTED COSTS	
Mar 09 Purchase of land Sep 09 Planning	Architects and engineers' fee	£4,000
permission granted	Groundworks	£16,000
Feb 10 Project put	Plumbing	£5,600
out to tender	Kitchen	£3,800
Jun 11 Groundworks	Bathrooms	£2,800
started on site	Tiles	£1,000
Aug 11 Frame goes up	Sauna	£1,700
Apr 13 Build complete	Lighting	£700
	Wood flooring	£1,300

SUPPLIERS

Architect Reynolds Architecture	01349 867766
Main contractor Alan Hardie Joinery	01381 621869
Door furniture Door Handles UK	01637 875255
Handles 4 Homes	0118 982 9170
Kitchen Howdens	howdens.com
Kitchen sink and tap Sinks-taps.com	0845 257 0656
Tiles Topps Tiles	0800 783 6262
Sanitaryware Bathrooms.com	0845 833 4441
Crosswater taps First Bathrooms	firstbathrooms.co.uk

Showerhead Nationwide Bathroomsnati	ionwidebathrooms.com
Lighting Inspired by Light	0870 242 6232
Sauna SaunaShop	saunashop.com
Wooden flooring Factory Direct Flooring	
factc	ory-direct-flooring.co.uk
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HOMES CONTEMPORARY-STYLE SELF-BUILD

Reclaiming VAT on Holiday Home Self-builds

Reclaiming the VAT on self-builds isn't as straightforward if you intend to let it out as a holiday home, as Nigel and Elaine discovered. Daisy Jeffery explains why

NIGEL AND ELAINE'S BUILD IN PICTURES



1. The site as bought



2. Groundworks commence



3. Frame delivered & erected



4. Main structure up



5. Main living space



6. Fixing the roof sheets



7. Exterior larch cladding installed

here are many draws to self-building a second home, and the financial gain of turning this into a lucrative holiday let business when you're not there makes it even more attractive. This certainly appealed to Nigel and Elaine who planned to self-build on Skye and let the property with a view to eventually retiring to the island. But unlike traditional self-build projects - where homeowners are able to reclaim VAT on building materials – there are a different set of rules that come with dwellings used as holiday lets.

If you're self-building a holiday home for yourself, then it is possible to reclaim VAT on building materials at the end of the project. However, if you're building with the intention of letting out the property most of the year, then this is likely to be considered a business and you'll be unable to reclaim the VAT. "Because we had mentioned about letting it out beforehand we were unable to claim anything back," explains Nigel. "The irony is that if we had said from the outset it was a self-build just for us, but then let it out after, we would have had no problems claiming the VAT back."

One option available is to register the holiday let for VAT and recover some of the VAT paid out by this means, but this will mean having to charge VAT on any future lets, and depending on how much you estimate to save this may not be worthwhile. On the other hand, the benefit of a holiday home being viewed as a 'qualifying business' is that you could claim capital allowances for certain items should the property meet certain criteria.

In order to claim for capital allowances – which could include items such as heating systems, lighting, fitted bathrooms and kitchens and furniture – the property needs to be let for 105 days of the year and available to let for 210 days. There are ways of 'deferring' if the property doesn't let for 105 days, but in this instance it's advisable to take financial advice. Note that you won't be able to let the property for long-term occupation - 31 continuous days or more - for more than 155 days in a tax year (so longer winter lets are actually acceptable).

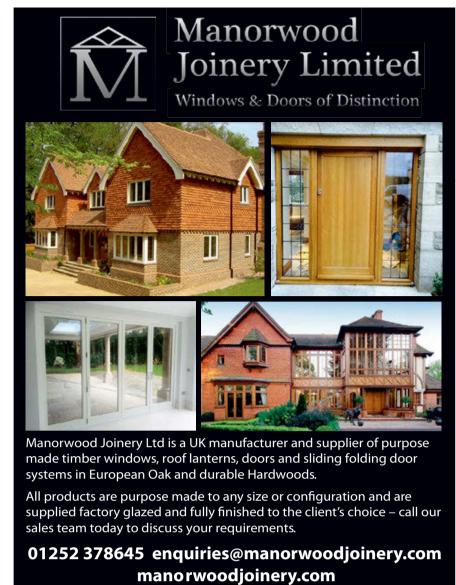
Should you decide to go down this route, it's advisable to consult an accountant to help establish what qualifies as capital allowances, and be sure to invoice these separately. $oldsymbol{\Theta}$

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Before & After

A contemporary extension transforms a 1930s home. Architect Des Ewing explains

he clients approached us as they sought more space for their detached 1930s dwelling, and wanted to include a study and large master bedroom. They also identified the problem of flow between rooms in the house and, as it was quite dated, wanted something modern, which directed us to designing a contemporary scheme.

The solution was to add an 84m² extension to the side of the property that would provide the additional accommodation required. As the front of the house faces a busy road, we chose to keep this elevation much like the existing structure

in order to avoid any planning problems; however, at the rear we introduced a contemporary design with large aluminium sliding doors, lots of glazing and, on the first floor, the master bedroom, identified by a chamfered box sitting higher than the rest of the property, featuring a zinc-clad surround.

Internally the proposal was to create an open plan layout that would solve the issue of flow between rooms and cater for large family gatherings, while also leaving room for more intimate spaces. By incorporating large sliding doors to

Des Ewing is a chartered architect and is principal of the practice Des Ewing Residential Architects in the UK & Ireland

the rear, this section now has a stronger connection with the south-facing garden and steps out onto a new raised deck.

In order for the extension to connect with the existing house, we opted for the same sand cement render and painted it to match. We chose this particular render for low-maintenance and sustainability purposes; it is smooth in texture and less porous, so will continue to look clean and fresh over time. The windows and doors were also changed to match the colour of the new aluminium sliding doors.

The project took about seven months to complete and the house has now been extended to a total footprint of around

316 m^2 . The clients are very happy with the finished result. $\ensuremath{\boldsymbol{\Theta}}$

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to be less harsh in traditional homes than in modern. Natasha Brinsmead explains 😁

ou mean you don't know what an arris is? Let us enlighten you a little. You might have come across the term arris in connection with the arris rail — the triangular piece of timber that helps to hold up a fence. The arris itself is a little known term for the intersection of two surfaces and, in the case of houses, is mainly used to refer to the point at which two walls travelling in different directions meet — for example, where the wall meets the ceiling or often for the corner formed by window surrounds.

So why is it so important? Although this is not necessarily a detail that tops your list of priorities when it comes to the design of your home, it's surprising what a difference it can make. Look in any modern developer home (and many modern self-built homes, come to that) or office space and you'll note that the arrises you have around you tend to be angular, quite pointy and really rather sharp. That doesn't necessarily make them bad arrises but it does make them rather unfriendly to the touch and, in the case of a household with uncoordinated toddlers zipping around, actually rather dangerous. Even worse, in the eyes of designers they are largely modern inventions that tend to be architecturally inauthentic in the context of a period house or period-style self-build.

The answer lies in the soft arris — a curved or soft junction, the slightly rustic appearance of which lends character and charm to cottages and other traditional-style properties that sharp, crisp and more modern arrises tend to lack.

Other reasons why they are often favoured over their more contemporary counterparts is that in the case of window surrounds, a curve – as opposed to a corner – is thought by some to allow a greater flow of light to enter the room.

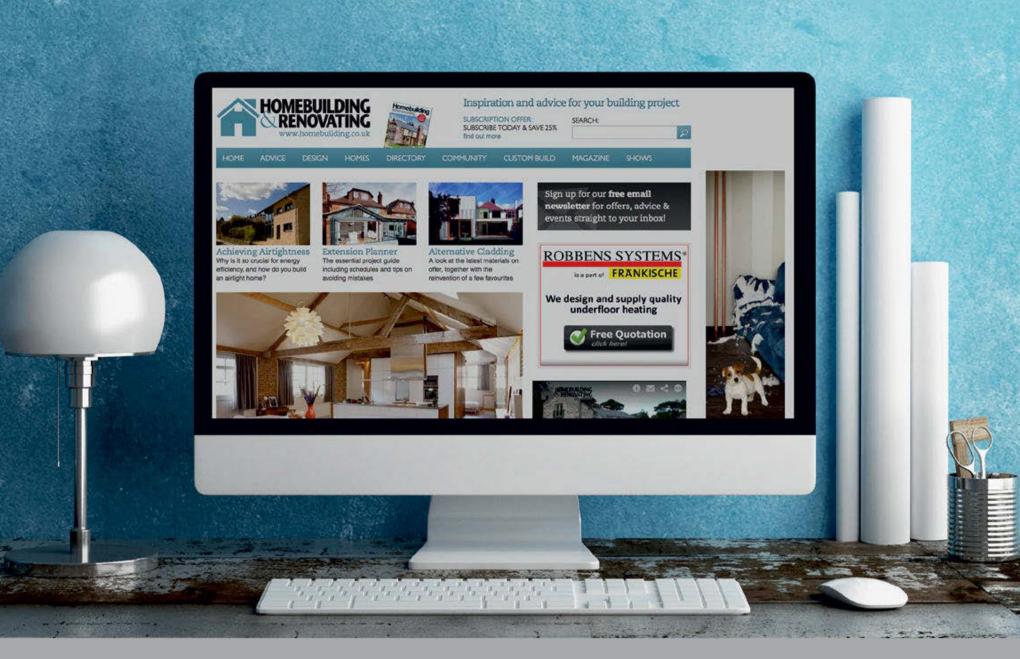


HOW TO ACHIEVE A SOFT ARRIS

- ◆ There is no textbook way in which a soft or curved arris is formed
 the method favoured by one plasterer can be very different from another. However, a standard metal angle bead something most of us would expect a plaster to use when plastering around corners is not needed.
- In the case of the arris between wall and ceiling there are various methods used to create a curve. Before the days of metal angle beads, thin sections of timber were used then taped over this is still a good way to achieve a less concise edge.
- Some plasterers will be confident and very capable of forming a curved arris by hand using their trowel, while others have been known to use rounded objects such as wooden dowling and even milk bottles to achieve the desired effect.
- At vertical corners, there are several different methods employed although it must be said that the success of this detail relies as much on the skill and experience of your plasterer as it does on the method and tools used. Once again, some will swear by hand-forming the arris using nothing but their trusty trowel, while others might use a trowel with a concave section cut out to smooth over a crisp corner after it has been formed. Both these methods work best when plastering on to a solid wall as opposed to plasterboard, where the thin nature of a skim layer gives the plasterer less plaster to work with.
- In the case of plasterboarded walls, using expanded metal lath (or mesh) in order to form the corner into pretty much any shape required before plastering over is a common technique, and one that is also used to form archways. This metal lathing is available in sheets or rolls and will be nailed to the wall before plaster is applied. Try Expamet (expamet.co.uk).
- In many cases, a curved arris should be used in conjunction with a splayed reveal (one at a larger than 90° angle rather than at a straight right angle). This adds to the 'soft' feel of the junction and is also beneficial for ensuring more light is introduced.
- Other options include using suitable ceiling coving to form the curve or a flexible plasterboard for broader curves, such as V-Cut's Flexiboard or their Fix-Fold plasterboard which can give a finish between a curve and crisp edge (vcut.co.uk).

Left: The Soft Arris in Action

In many ways this is a masterclass in how internal walling affects both the amount of light entering a room and the character. The splayed reveal works in conjunction here with the curved arris — the shutters and window seat emphasise this perfect period feature



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HOMES MODERN BARN CONVERSION



THE QUICK READ

- ⇒ lain and Helen Townley have taken on the task of changing the use of one of the large barns on their farm, converting it into a modern family home
- The Grade II-listed barn was on the 'buildings at risk' register, which meant that the conservation officers were keen to see the structure put to good use and saved from dilapidation
- ⇒ Due to the poor condition of the stonework on the external walls, a new timber stud wall structure had to be built within the original structure and the exterior repointed

or Iain Townley, the thought of undertaking a barn conversion project hadn't even crossed his mind when he and wife Helen bought a well-run sprawling hill farm in Macclesfield back in 1999, which included an old three storey farmhouse, 67 acres of land and several outbuildings. At the time Iain was farming nearby land, and when the farm came on the market the opportunity for a project immediately appealed to Iain's love of building.

Embarking on the Rebuild

Originally the couple bought the property with the intention of living in the existing Grade II-listed farmhouse, however, after a couple of years realised that they simply didn't need all the space that the three storey, six bedroom property offered them, and so in 2009 they turned their attention to the outbuildings.

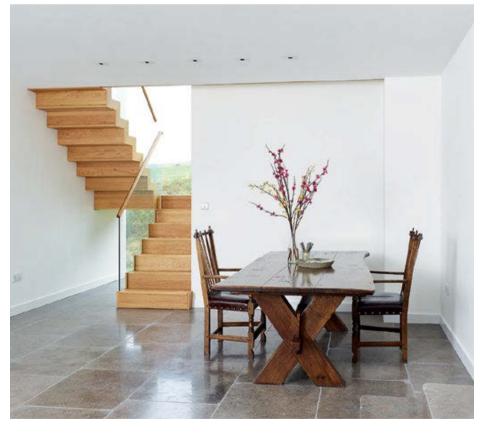
After deciding to renovate one of the larger barns, Iain submitted plans for the conversion and change of use of the building, and planning was granted in 2009 — although work didn't start until the end of 2011. In order to create the feeling of two distinct homes, the barn was separated from the main farmhouse with a series of drystone walls and a new entrance track was created.



Above: Open Plan Family Room

In order to achieve light, open spaces within the previously dark, cramped barn, openings have been created to increase flexible living space — the open plan kitchen/dining/family room is case in point. Large sliding glass doors in this space from Velfac provide easy access to the gardens, as well as offering views over the farmland







HOMES MODERN BARN CONVERSION

Far Left: Kitchen

The contemporary Bulthaup kitchen, which is open plan to a dining and family space, is a masterclass in minimalist design with a range of built-in appliances offering sleek lines (including the extractor built in to the ceiling). A deep picture window offers glimpses over the landscape from the kitchen sink and Mandarin Stone flooring runs throughout, with underfloor heating from Nu-Heat keeping the surface warm underfoot



Achieving Planning Permission

Since buying the site in 1999, Iain had worked closely with local architects Hayes and Partners – who specialise in design and planning services for buildings that are in need of conservation work and listed properties – and enlisted their help dealing with the various planning and heritage departments as well as with the design of the new barn. Surprisingly, given the change of use application and the building's proximity to the Peak District National Park, planning didn't prove too difficult. "In Cheshire East Council's planning area they're a bit more progressive and relaxed," explains Iain, "and as we worked with Hayes and Partners and consulted the conservation officers at every stage, it made things a lot easier."

A key advantage was that the barn was on the 'buildings at risk' register, as well as being Grade II listed, which meant the conservation officers were keen to find a different use for the building to save it from dilapidation and a roof that was caving in.

A Sympathetic Conversion

Keen to be hands-on with both the design and building work, Iain took on the role of project manager and employed several contractors he had met over the years to help carry out the work. Local builder Michael Brown, who specialises in stone and uses traditional methods, was employed throughout the build and was joined by Mark McDonald of McDonald Wood who helped pull the whole project together.

Keeping changes sympathetic to the existing structure was the biggest priority, and was not without its challenges. "On the side that can be seen from the road we had to keep the same openings to retain the integrity of the building," explains Iain, "but on the other side we had a bit more freedom to play around with the glass to let more light in. Barn conversions can often be quite dark in places, but we managed to get a lot of light in by using engineered glass."

As the barn had been heavily used when the farm was up and running, it was "absolutely rat-infested" and the stonework walls internally were quite dilapidated. This meant that a new timber stud wall structure had to be built within the original building.

"The best stonework was on the outside, but even that was in a terrible condition. Most of the lime mortar pointing had been washed away over time on exposed sections, so we repointed the whole building with a mortar matching the original," explains Iain. "The large area of stone flag roof was completely relaid with reclaimed sandstone grey slates too. Unfortunately keeping the stone feature walls inside just wasn't feasible, so we worked with the stud walls and went down the super-insulated route which has made a big difference to the internal environment and makes the house incredibly cheap to run," he adds.

>

Left: Living Room

A comfortable living room steps down off the large glazed hallway with feature staircase from Demax (FAR LEFT). Double-aspect windows bathe the room in natural light while a Morsø woodburning stove offers additional warmth as well as a focal point



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HOMES MODERN BARN CONVERSION

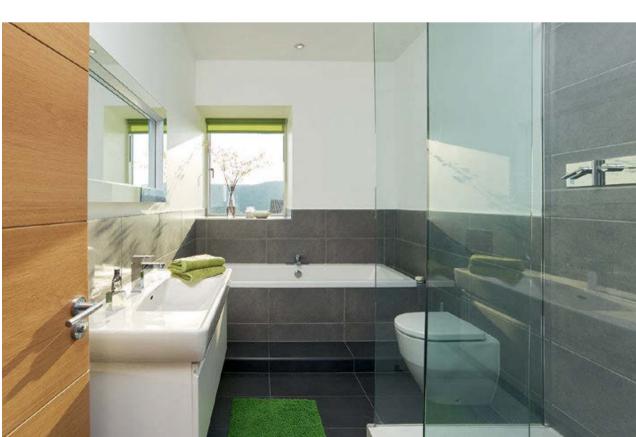
Below: Bathroom

A monochrome palette in the family bathroom, designed by Inside Out Buxton, is in-keeping with the contemporary theme. The sanitaryware is from Travis Perkins

Iain and his team ran into a further set of challenges dealing with the building's uneven surfaces, causing particular problems when it came to fitting the engineered glass over the stairwell. "Obviously glass needs to be installed onto a straight, flat surface, but those don't exist in the barn, so that definitely caused a few issues," says Iain. Also during the build, a new planning application was needed to change the windows from timber frame to aluminium composite and to add structural glazing in lieu of the originally proposed glazed oak screens. "It was a bit of an education for some of the companies we worked with," admits Iain.

Despite the arduous task of dealing with a structure of this kind, and a build time of two and a half years, the finished result is a spectacular home which pairs all the rustic charm of a stone barn with contemporary, open plan interiors and modern luxuries such as underfloor heating. "The house is great — it's warm, light and cheap to run with good views, so it's a much better living environment," says Iain. But has all the hard work put him off taking on another project? "Absolutely not. I am currently working on another stone barn on site as well as an additional project which is going to be split into three residential units — my main goal is to get another site with land to build a timber frame house, which is next on the list."













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HOMES MODERN BARN CONVERSION

The Project



Iain and Helen TownleyOwners

contemporary layout from the kitchen to an open plan living area and then straight out through glass doors to the meadow and stream.

ARCHITECT'S VIEW

HOMEOWNER'S VIEW



Eleanor Hall Architect

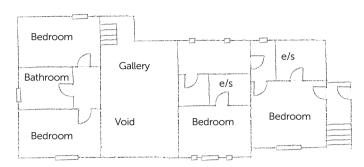
The building had a large carriage opening which leant itself to the creation of a large double-height entrance hall with a glazed bridge across linking the first floor bedrooms and providing a contrast with the original trusses. The existing thick stone walls led us to consider large glazed areas to allow natural light to penetrate the building. These simple elements sit well against the rough stone exterior.

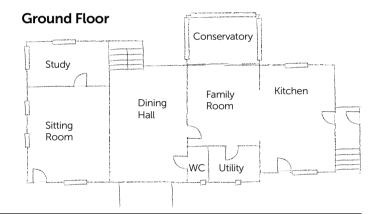
Our design brief was for a conversion with a light,

contemporary interior which would allow us to view and access the adjoining landscape. At the

rear, a new opening has allowed for a large glazed structure housing the staircase. We now have a

First Floor





SELECTED COSTS

Architect and	£22,000
professional fees	
Site preparation	£10,000
Building work	£247,000
and materials	
Stairs	£20,000
Kitchen and utility	£46,000
Structural glazing	£29,000
Windows	£18,000
Bathrooms	£30,000
Lighting	£17,000
and electrics	
Underfloor heating	£3,500
Stone flooring	£7,100

SUPPLIERS

Architect Hayes and Partners		
01625 426218		
Stonework and building Michael Brown		
01625 425837		
Builder McDonald Wood0161 456 4416		
Groundworks and drainage Richard		
Oldham Surfacing Ltd01625 610255		
JCB hire Joseph Torr01625 422902		
Plumbing Peter Gratton01260 252648		
Lighting design David Village Lighting		
0114 263 4266		
Electrics Fred Wardle01260 253229		
Drystone wall Redstone Centre		
01270 882200		
Steel staircase Demax01760 721222		

Windows Velfac	01223 897100		
Kitchen Bulthaup	0844 846 7810		
Bathroom design Inside Out Buxton			
	01298 70766		
Building stone Earl's St	tone01625 572125		
Stone flooring Manda	rin Stone		
	01625 531343		
General building supp	lies		
Travis Perkins	01625 426262		
MKM	01625 509380		
Underfloor heating Nu-Heat			
_	01404 549770		
Morsø woodburning stove Bywaters			
_	01298 812122		
Sanitaryware Travis Pe	rkins01625 426262		
-			

PROJECT TIMELINE

May 10 - Feb 11 Internal structure gutted; floors excavated; creation of new openings; installation of steelwork; concrete slab poured

Sep 12 Opening created for staircase glazing; minor bulges in stonework rebuilt; new stone heads and cills on window openings where applicable

Mar 13 Planning approved for aluminium composite windows and new roof openings; utilities installed and drainage

system with water treatment

Apr 13 Studwork; first fix plumbing and electrics; first floor boarding; external repointing with matched lime mortar; first fix of steel staircase

May 13 Membrane and insulation of roof space and internal walls within studwork; installation of structural glazing around stairwell; installation of flue system for woodburning stove

Jun 13 Installation of underfloor heating

and screeding of ground floor

July 13 Installation of windows and roof lights; plasterboarding and plastering **Aug 13** Installation of plant room and

Aug 13 Installation of plant room and boiler; second fix plumbing

Sep 13 Second fix joinery and skirting

Oct 13 Second fix electrics

Nov 13 - Apr 14 Landscaping;

woodburning stove fitted **May 14** Kitchen installed

Jun 14 Completion certificate issued

QUICK IDEAS

Windows for Contemporary Homes

Modern homes tend to have more glazing than traditional styles — which makes the design choice critical. Natasha Brinsmead explains the key considerations



MINIMAL FRAMES

When it comes to modern window frames, the thinner the better to maximise light and views. Aluminium is the go-to material for strength, stability and minimal sightlines. (Image: IQ Glass)



BESPOKE

Contemporary homes provide scope for windows in unusual shapes and sizes, so get your designer to plan in a mix. Narrow openings work well, offering light and privacy on some elevations. (Image: Velfac)



Flush windows work best with the minimalist ethos of contemporary homes, but don't ignore the drama of a box design - not least for an ace window seat. (Image: IQ Glass)



MIX FIXED WITH OPEN

You'll want control over natural ventilation — particularly in bedrooms and kitchens. Assess how the sightlines of fixed and opening panels match. (Image: Origin)







WOOD WORKS,TOO

Aluminium is the natural choice for many self-builders and renovators of contemporary homes, but don't ignore wood. It has a much more organic feel and can tone down the occasionally clinical, harsher feel of modern exteriors. (Image: Livingwood)

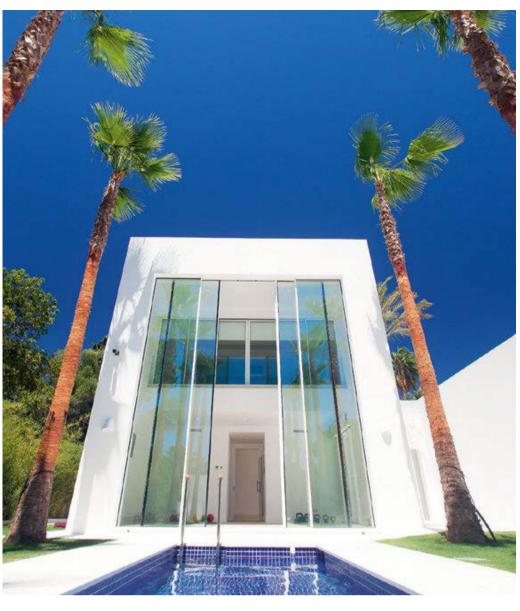
THINK SASH

Below: Traditional windows, particularly those with classical proportions – such as the Georgian sliding sash – can add grace to the modern elevation and mix well with more modern frames. (Image: Lomax & Wood)



INTEGRATED BLINDS

Left: Modern windows are a masterclass in minimalism — so don't spoil the look with traditional curtains. Integrated blinds (here in a triple-glazed window) can bring you privacy and warmth without the fuss. (Image: ecoHaus Internorm)



GO MASSIVE

Away from the regimented rules of period style, going modern allows you to go big. So go as big as you can for lots of light, drama and minimalist beauty. These huge 5.7m-high patio windows are a case in point — and are totally frameless. (Image: Reynaers at Home)

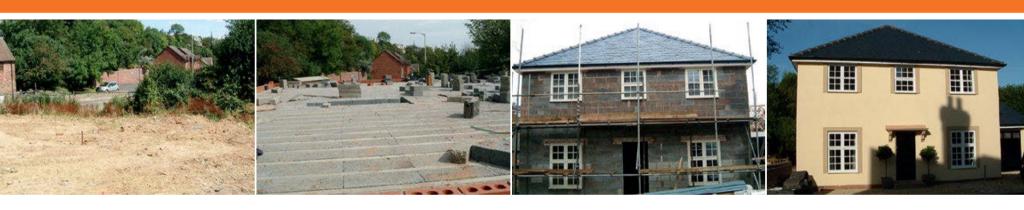


THE COMPOSITE

An aluminium exterior with a timber interior is in many ways the best of both worlds, allowing for thinner profiles with a tactile softness. (Image: Velfac) \bullet

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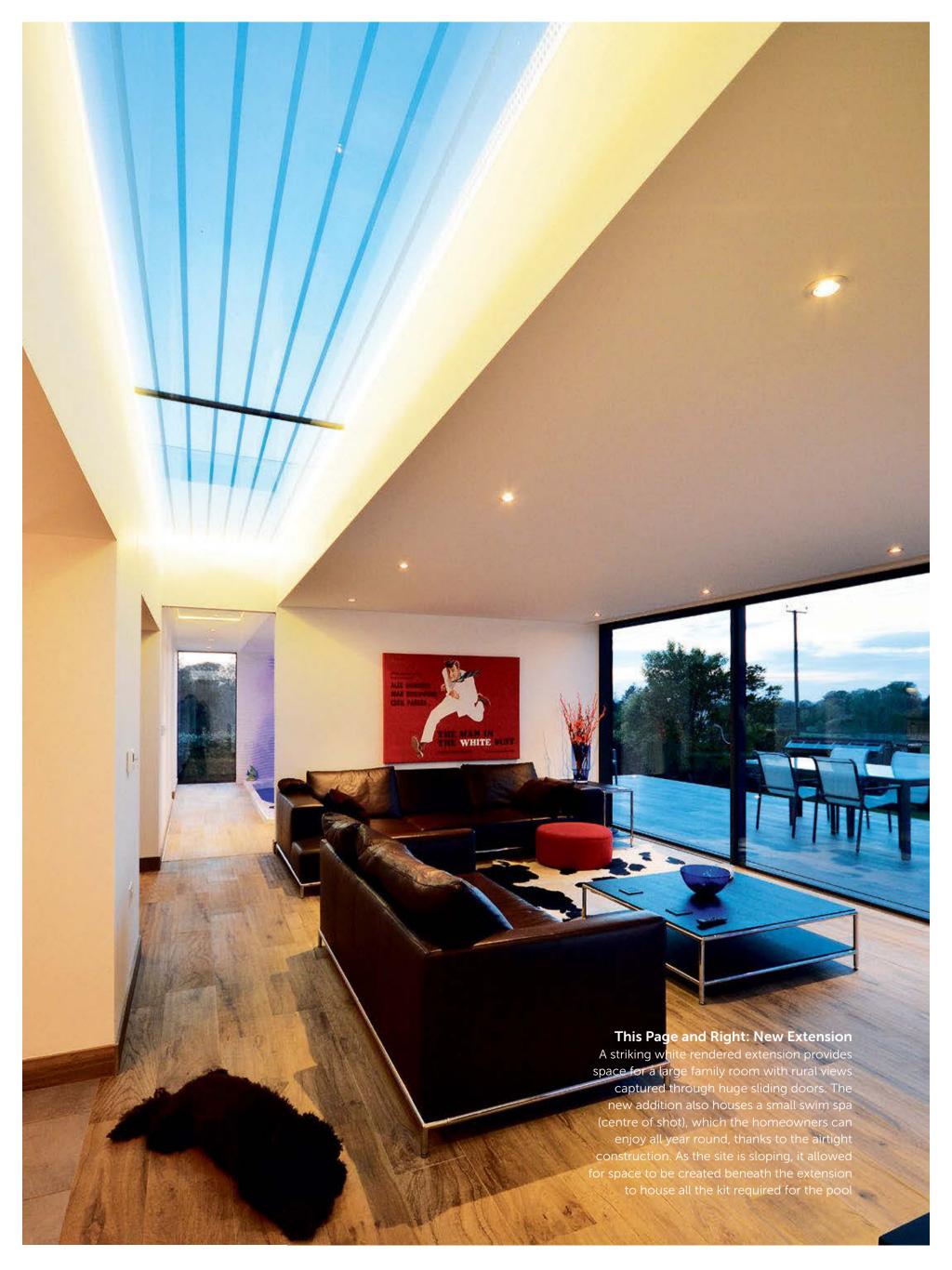
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THE DESIGNER'S VIEW

Soaking up the Views

A striking contemporary extension transforms a bungalow — we catch up with both architect and homeowner to discover the story behind the design





JONATHAN DALE
Architect Jonathan Dale is
co-director at award-winning
practice Jane Duncan Architects
and has been designing private
houses for nearly 20 years

JAN AND GRAHAM OSMOND The homeowners



HB&R: Did the homeowners, Jan and Graham, approach Jane Duncan Architects with a detailed brief?

Jonathan Dale (architect): They wanted to replace quite a tatty old conservatory. It provided family space, but it was too cold in winter and too warm in summer. The brief was threefold: they wanted a space that would serve as the family room; they wanted a boot/utility room; and finally space to incorporate a swim spa. From this point, I started to develop ideas for a contemporary extension with my colleague, architect Rob Harwood.

Jan, did you always intend to extend the house, and why did you decide to approach Jane Duncan Architects?

Jan Osmond (homeowner): We bought the house in 1998, and we always knew we would replace the huge, ugly PVCu extension on the back. However, both Graham and I worked away from home a lot, so it took a long time before we finally got round to it.



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THE DESIGNER'S VIEW CONTEMPORARY EXTENSION

Below: Master Bedroom

The new flat-roofed extension doubles as a stunning roof terrace, accessed from the master bedroom suite. A contemporary-style dormer, complete with sliding doors, replaces rooflights and has opened up this room, providing views over fields beyond



We originally approached a building company. We obtained planning permission for their design, but I knew what had been designed just wasn't what I wanted; I would have always been disappointed.

We came across Jane Duncan Architects after searching for projects we liked on the internet. We knew we wanted to take advantage of the views and wanted glass with minimal frames. Upstairs, the loft conversion only featured rooflights; again, we wanted to open this up to the views. The rest of the ideas developed following lots of meetings with Jonathan and Rob; the whole thing really snowballed from there.

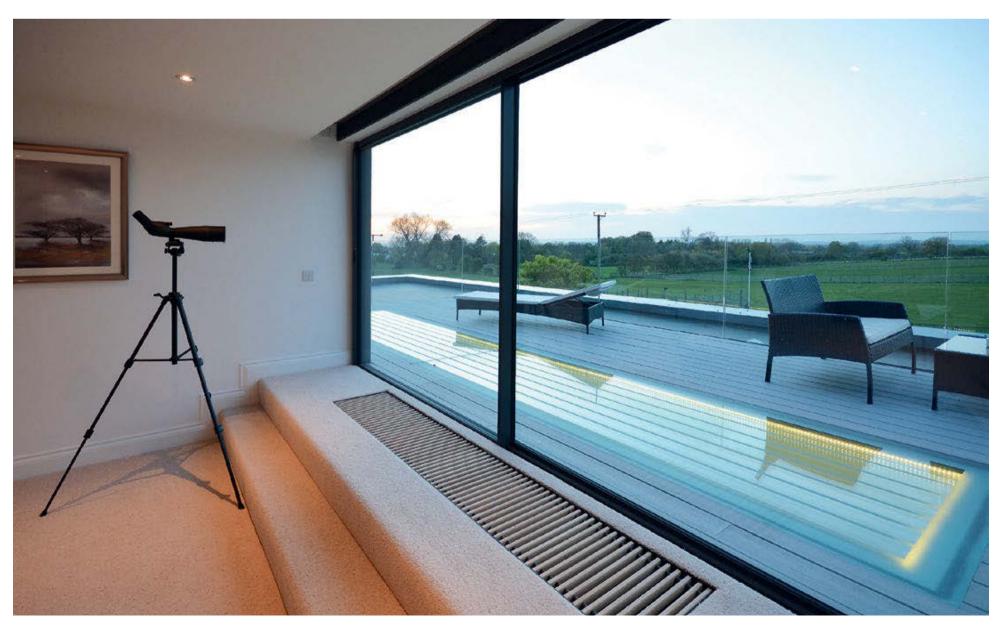
I'm a homes magazine enthusiast, so I had a vision in my head of what my dream home would look like. My expectations were so high that I'm surprised I wasn't disappointed when I saw the finished design. Jane Duncan Architects were fantastic; they somehow knew exactly what we wanted.

Was planning permission required for this new addition?

JD (architect): It was, and permission was obtained first time. The extension is on the rear of the house, but it's relatively visible from a few angles, including the local train station across the field, but there were no objections. We suggested that Jan and Graham approach the neighbours early on; there was good dialogue between them.

The white render ensures that the new extension makes a statement against the brick-clad bungalow; how did you arrive at this finish?

JD (architect): We looked at several different finishes, including



THE DESIGNER'S VIEW CONTEMPORARY EXTENSION

dark-stained timber and contemporary brick. We felt that, as glazing takes up the majority of the façade, brick would be too much of an expense. We dismissed stained timber due to ongoing maintenance. We also felt that if we were going to add a contemporary extension, then there should be a stark contrast between old and new: white render gave us that. Once they saw the designs, it was Jan and Graham's preference, too.

How did you choose the construction system?

JD (architect): Steel frame was used. We did consider timber frame, mainly because of the speed of the build and that it only requires dry trades. However, considering that large spans of glazing were being introduced (more than half of the main elevation is glass), the steel frame made sense for creating large openings.

The infill walls are blockwork. As we were introducing dividing walls (between the different rooms), the steel rests on the blockwork, without the need to introduce supporting pillars.

And how about the heating system?

JD (architect): We used heated glass. It all came back to the swim spa and the problems associated with condensation. Although the swim spa is too small to justify an additional system that would blow warm air at the windows to prevent condensation, the heated glass provided a solution to potential condensation issues.

It runs on electricity and is very responsive, unlike underfloor heating, which can take up to a day to heat up; I suppose it's comparable to a giant radiator. Jan and Graham also wanted wood-effect porcelain flooring; if they had chosen stone, then we would have perhaps specified underfloor heating instead, to take the chill off.

How did you find a contractor?

JO (homeowner): Jane Duncan Architects put the project out to

tender. The list was then whittled down to three contractors, and we phoned each one to talk to them. We opted for the one we got on with best, which proved to be a good decision.

Jan, what was your experience of living in the house while the work was being carried out, and how involved were you?

JO (homeowner): The old doors to the conservatory were retained and the contractor used them as temporary doors between the house and the extension, so the work was pretty self-contained. When the contractors moved on to the master bedroom suite, we moved into the downstairs bedroom. We were only really affected when they finally broke through.

We trusted the architects' plans and we trusted the contractors, so we didn't interfere with the 'nitty gritty' of the build. But we were on hand to answer any questions.

Were there any issues during the build?

JO (homeowner): The architects, the contractor, the subbies, they were all great — I could not fault them. The only problem we had on site was the glass. We signed a contract that agreed the contractor would manage everything except for the glass, which we would take on. We had so many problems with the glass, from units not fitting to them leaking.

The build took one year, one week and one day — it would have been built to the original schedule (around six months) had it not been for the problems and delays with the glass.

What's your view of the extension now it's finished?

JO (homeowner): It's amazing — I look at it and think 'wow, is this my house'? It cost more than we intended, but we'd spend that money and do it all again tomorrow. It's also proof that hiring an architect is well worth it. •



Left: Family Room

The new living space created in the extension certainly makes the most of the views over adjacent fields. Large glazed sliding doors can be opened to access the terrace for alfresco dining. The glazing within the roof helps to bring natural light into the adjacent kitchen and entertaining space



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BUYING MATERIALS

Shower Enclosures: The Five-Minute Expert

A quick guide to becoming an expert in luxury and practical showering, plus five of the best new designs. By Natasha Brinsmead





Fitting It In

Most fully framed shower enclosures will measure around 1.7m to 2m in height so if you have a low ceiling (for example a bathroom located beneath a sloping ceiling in a converted loft), you may need to have something custom made. There is no minimum size for an enclosure, but it is advisable to go no smaller than 900x900mm so as to avoid feeling cramped.

Forming an Enclosure

Full enclosures are made up of panels, a door and a tray often supplied as complete kits, and there are a range of sizes and shapes to suit your situation. If you have a recess or alcove you basically have a ready-made enclosure, requiring a shower tray and a door or screen only. Similarly, if you are installing your

shower in a corner, two of the walls are already in place, meaning you only need a panel and door to complete the enclosure.

Walk-in showers tend to be more of a showering area, featuring just one glass panel to separate them from the rest of the bathroom and no door — walls and floors must be fully water-proofed in the same way a wetroom would be.

Wetrooms

For a wetroom to work, skilled installation is key. The floor must slope towards a drain, they have to be constructed atop a deck and finally properly waterproofed — floors and surrounding walls must be primed, covered with a membrane and tiled. You can buy DIY complete wetroom kits but hiring an expert to complete the task is usually best.



- **1.** The single-entry shower panel from Glass by Merlyn is perfect for recessed or corner enclosures and costs from £612 (merlynshowering.com)
- **2.** The OpenSpace enclosure from Duravit has two glass doors which fold away. It costs approximately £2,100 (duravit.co.uk)
- **3.** The minimalist ME by Starck range for Duravit includes sanitaryware and shower trays. POA (as above)
- **4.** Aqata's Spectra SP440 doubleentry shower screen is suitable for wetrooms or low-level shower trays. It costs from £914 (aqata.co.uk)
- **5.** The Aquaglass+ SQ Mirrored Walk-In features a mirrored panel and costs from £385 (frontlinebathrooms.co.uk)





Door or Screen?

There are doors and screens suited to every size and shape of bathroom. Hinged doors offer the widest opening with each door having side hinges and opening outwards. Pivot doors have two pivot points at the top and bottom to allow them to swing outwards. They give a slightly smaller access area than hinged doors, but tend to be sturdier.

Sliding doors are good for larger enclosures, made up of panels that overlap and compress to the width of just one panel when open, requiring no out-swing area. Smaller rooms suit inswing doors that open inwards and slide on a track.

In wetrooms or semi-wetrooms where the shower is part of the room, dividing panels of glass (often frameless) are the ideal way of containing some of the spray from the shower.

Cabins

Comprising shower and enclosure all-in-one, shower cabins are more expensive than a traditional enclosure but come equipped not only with a shower, but often with body jets, seating, lighting and sometimes music, fragrance and steam too. \blacksquare

FOR MORE SHOWER ENCLOSURE SUPPLIERS See page 175 or visit <u>homebuilding.co.uk/directory</u>





Everes



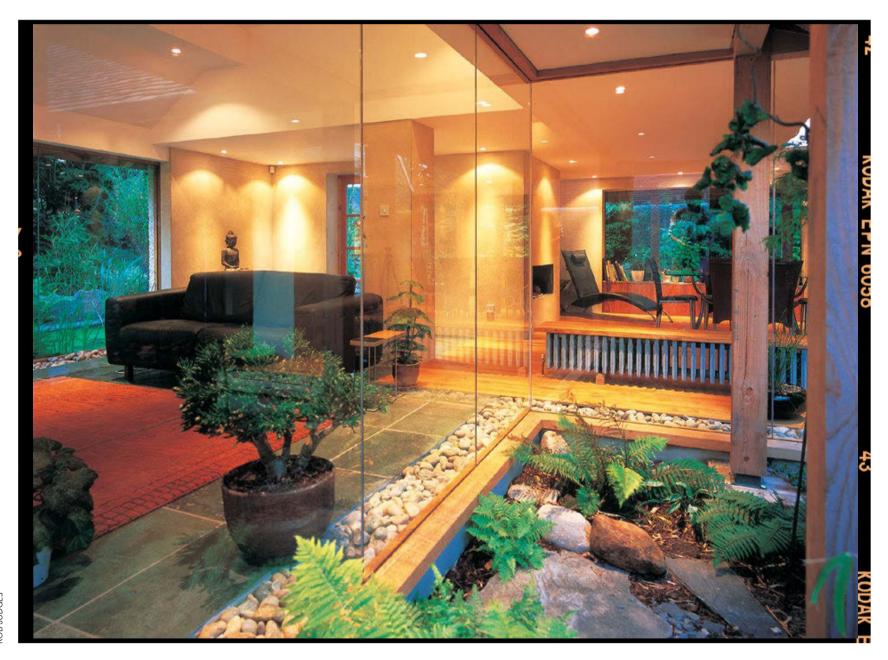
Call 0800 010 123 and quote HBUILD or visit everest.co.uk

INTERIOR ARCHITECTURE

Ideas for Every Room

In this cut-out-and-keep gallery, Natasha Brinsmead offers the best spatial design ideas for all the elements of your new home

THE OUTSIDE

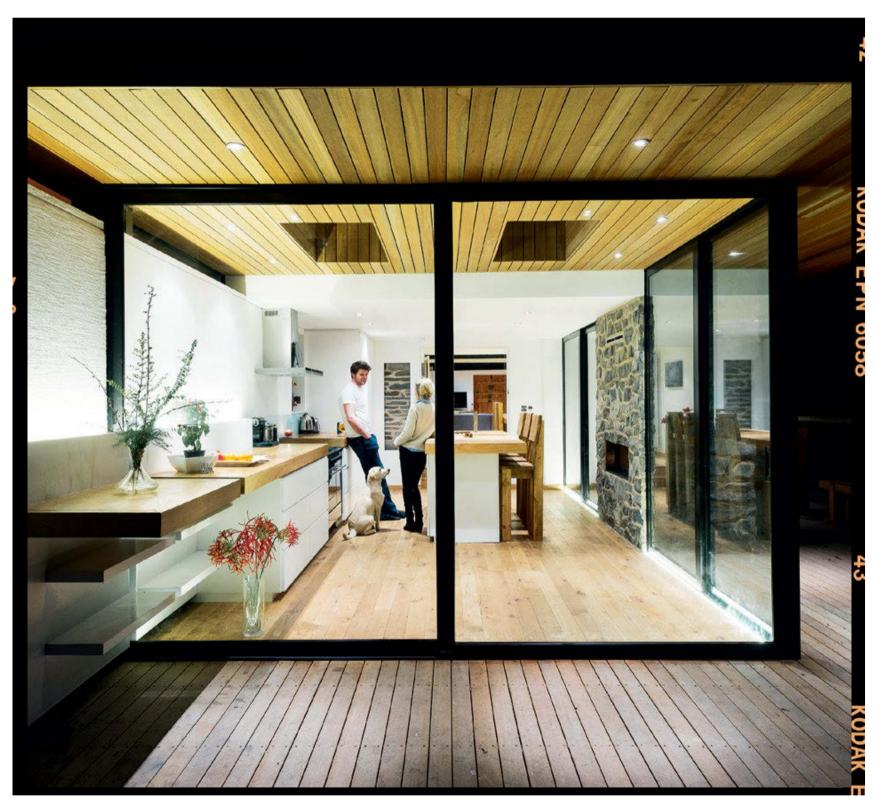


DR 11 INCES

The Internal Garden

Creating an internal garden at the heart of your home provides an unusual and exciting focal point through which all spaces within the house are unified. Expansive glazing wrapping around the 'garden' and sliding doors mean that even when it is cold and rainy outside, you get a sense of being connected to the elements.

THE KITCHEN



The Inside-Out Surfaces

Continuing the same flooring from inside to outside is a stylish way to visually connect your internal and external spaces — but doing it with the ceilings and even worktops adds a very exciting element. Timber cladding and textured plaster surfaces work beautifully here.

THE STUDY



NIGEL RIGDEN

The Waist-Height Window
Window placement is key to the enjoyment of a room, and while high-level and eyelevel windows are often specified to take advantage of a view, long, narrow mid-level windows can make a lot of sense — offering glimpses of scenery when sitting down, lying in bed or taking a bath that would be inaccessible with a standard-height window.



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THE LIVING ROOM



JEREMY PHILLIPS

In-Wall Storage
Storage space is essential for a home to run smoothly, but there just never seems to be enough of it. Carving nooks and shelving from your walls as opposed to viewing them simply as solid partitions is a good solution to a common problem.





Left: InSinkErator's 3N1 tap offers filtered steaming hot, hot and cold water. Shown in brushed steel, also available in a chrome finish, H36.8, from £799

Above: The Evolution 200 waste disposer makes food waste management more hygienic and simple, H34.5x W23.5xD17cm, from £599

Eco-Friendly Kitchen Innovations

Enhance your home with the latest solutions from InSinkErator

hether you're remodelling your kitchen or simply looking for helpful updates, it's a good idea to consider the smart new devices available to make everyday tasks easier and more efficient. InSinkErator is a leading manufacturer of instant hot water taps and waste disposers, with a focus on environmental benefits and hygiene, offering easily installed systems that will transform the way your kitchen functions.

InSinkErator food waste disposers deal efficiently and hygenically with leftover food scraps that are unsuitable for mulch, to complement or provide an alternative to home composting. The food waste disposers are installed neatly out of sight under the kitchen sink, and the range comprises models to suit every household, each with the highest standards of design, performance and ease of installation. Food waste is quickly ground into tiny particles with an incredibly quiet operation and then simply

flushed down the drain, where it can be transported to a water waste treatment plant and made into biogas or fertiliser.

The latest addition to the InSinkErator range is the 3N1 steaming hot water tap, which can dispense up to 98°C steaming hot water, alongside hot and cold options, from one stylish fixture. Supplying instant hot water while clearing the worktop of a clunky kettle, the 3N1 kitchen tap has a minimalist Italian design and comes in finishes of chrome and brushed steel.

Technological advances mean that integrating eco-friendly appliances into the home has become more accessible than ever before, and it is now possible to have the latest environmentally responsible innovations at an affordable price. An InSinkErator steaming hot water tap is approximately 20 per cent more energy-efficient than boiling 10 cups of hot water a day in a kettle, while using less energy than a 40W light bulb.

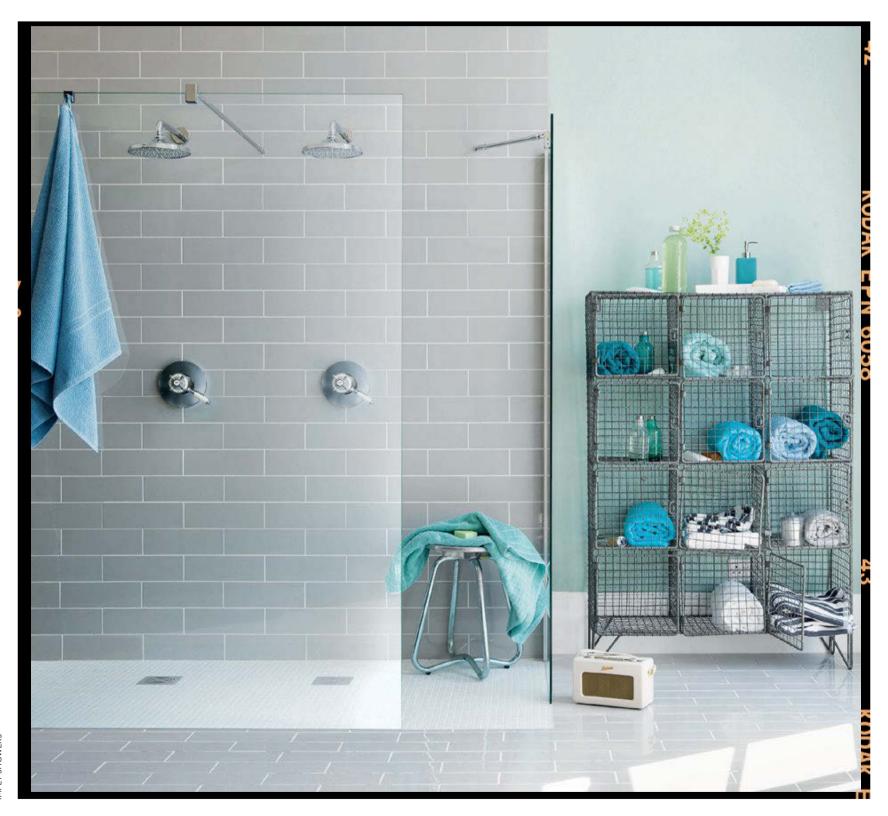
Linda Phoutthasak, spokesperson for InSinkErator Europe, says: "InSinkErator is committed to developing practical, convenient and helpful solutions that can make a big difference to any kitchen, both in aesthetics and convenience.

"We strongly believe in creating products that promote resource-saving. The immediate availability of steaming hot water results in little to no water waste, while our disposers ensure responsible food waste management. Our products are ecofriendly and save time, money and energy."

For more information on the complete InSinkErator range, visit InSinkErator. co.uk or call 01923 297880.



THE BATHROOM



IMPEY SHOWERS

The Double Drencher

Tandem showers might seem excessive, but those with children may value the opportunity to get two showered at once, or be able to shower at the same time without having to stand and shiver while they steal the best spot. Those short of time could view it as a way to catch up with their partner before work.

HOMES COHOUSING SCHEME

Better Together

An innovative cohousing scheme in London showcases an interesting way of creating an individual home. But how does it all work?

Words: Jason Orme Photography: Ioana Marinescu



Above and Right: The Layout

The project consists of six unique homes built around a central communal area — designed to allow each house to have private views and avoid overlooking. Wienerberger's Pearl Grey bricks mix with vertical timber boarding

THE QUICK READ

- Six families formed a company to buy a 1,000m² backland site in north London
- >> They commissioned an architectural practice to design six homes joined around communal courtyard-style spaces with perimeter gardens
- >> The Copper Lane Group managed to achieve their aims of living in large (for London) individual homes they could not have afforded elsewhere — and created a new community

hat happens when a group of people decide to get together and commission a single project to serve all their housing needs? Cohousing, as it's known, accounts for 10 per cent of all new dwellings in Berlin, and is being seen by the powers-that-be in housing and planning departments in the UK as an interesting part of the armoury to solve the housing crisis. All very well, but for those of us who feel a home is a chance to escape other people, and think the idea of shared facilities is something best left to student memories, what is such an arrangement like to live in and, just as importantly, what is it like to build?

There are already a few landmark cohousing schemes up and down the country, previously featured in these pages – notably LILAC in Leeds and Forgebank in Lancaster (have a look at the excellent Collective Custom Build website to search for more) – but the first in London, 1-6 Copper Lane, is a great example of how cohousing provided a very specific solution.

London, of course, has its own unique housing market that makes those of us living elsewhere in the UK rather glad we're not there. Rocketing housing prices and a huge influx of foreign investment have ensured double-digit price growth in recent years when the rest of the UK has trundled along with modest common sense. All very well for those of us in the Shires — but what if you do live in the Capital? More specifically, what if you're trying to get that next step on the ladder, the family home ideally with a garden, and all around you're looking at prices that left reality behind years ago?

Back in 2008, two members of the group came across a 1,000m² backland site occupied by a rundown church in north London. They asked around and eventually six families formed a limited »





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HOMES COHOUSING SCHEME





company with the intention of buying the land (without planning permission) and turning it into six homes to meet their needs. Simon Bayly, one of the group, explains it thus: "On a purely pragmatic level, we are returning a derelict site to use in a way that's hopefully appropriate to the local situation. The project would not have been commercially viable at the scale we are doing it for a developer, because they would expect to make a sizeable profit on what is a risk-laden and time-consuming activity: buying land without planning permission; taking a minimum of three years from start to finish; and many unknowns along the way. That is why a developer would want a significantly denser level of housing, to create more individual units, as is clearly evident from most speculative new build projects in cities. It's viable for us because we aren't looking for profit, and building new in London is cheaper than buying a 'second-hand' house."

The structure of the group is impressively formal: all members are "directors" of the company, which owns the freehold and the common parts of the development. Individual households own the leaseholds on each unit within the development.

The six families were keen to pool their resources and create a clever balance that avoided the approach a traditional developer would have taken. Instead there's a mix of privacy and the traditional 'home' values that most of us relate to, and the benefits of communality, with shared public spaces and all the efficiencies of spatial design that working together allows. The group describes itself as coming from a variety of cultural and professional backgrounds, from designer to artist to psychotherapist. The members shared a set of design principles for the project above and beyond

Above: Levels

Some of the houses have three storeys, others two. It's all about introducing a sense that these are six very different homes rather than a group, unilateral project

basic objectives of cohousing, and a wish to work in a democratic and considerate way. The purchase of the site was financed by the group's pooled funds, with the later construction of the project funded by a mortgage from the Ecology Building Society, who specialises in arrangements for schemes with particular socially conscious aspects.

They appointed Henley Halebrown Rorrison Architects to help them realise their scheme. The Copper Lane Group formed a brief around a sustainable approach to construction, energy use and land management. Key elements of the design were the maximising of shared resources including laundry facilities, a communal hall and gardens. Planning permission for the finalised scheme at 1-6 Copper Lane took five months and was granted in March 2012.

The scheme is an interesting blend of inward and outwardlooking elements, with all six houses designed with views of their own garden areas, but with the front doors opening onto a relatively public courtyard-style space. This garden perimeter helps to reduce the impact of the development on its surroundings and feels a little like an island in the middle of the high-density urban environs. The timber frame houses are built with energy efficiency in mind with extra insulation, high levels of airtightness and heat recovery systems, and clad in timber and brick. Internally there is a shared

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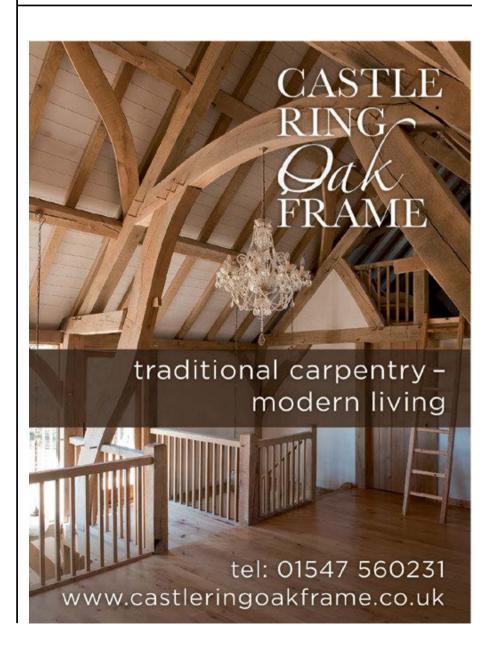
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HOMES COHOUSING SCHEME





palette of materials — a lot of engineered timber, ply and polished concrete, with each home challenging the traditional concept of terraced home living in a slightly different way. Each home feels part of a collective but none are entirely the same.

So how communal is it? How does it fit? At the time of *Home-building & Renovating's* visit, the group were still in the process of moving in. Some families were further down the line than others. It was clear that it had been a long process — some six years from the first genesis of the idea to the reality of unpacking boxes. So what are the good things? For one, it doesn't feel like inner-city London, for sure, and the collective whole is certainly bigger than the sum of its parts when it comes to a nice, attractive mini-community off the beaten track — on a site that an individual could only have ever aspired to if they were a hedge fund manager or investment banker. Another plus is that the six homes feel part of something yet are not overlooked and have plenty of privacy.

Cressida Hubbard of Copper Lane Group sums up their intentions: "We were looking for a way to retain our own self-contained living spaces, combined with a number of indoor and outdoor spaces that would encourage different forms of interaction — sharing a meal, planting a vegetable patch, a chat over the washing machines, book sharing through a communal library, a shared workspace, a ping-pong table, a community dog, a place to bump into each other and exchange a few words before the end of the day."

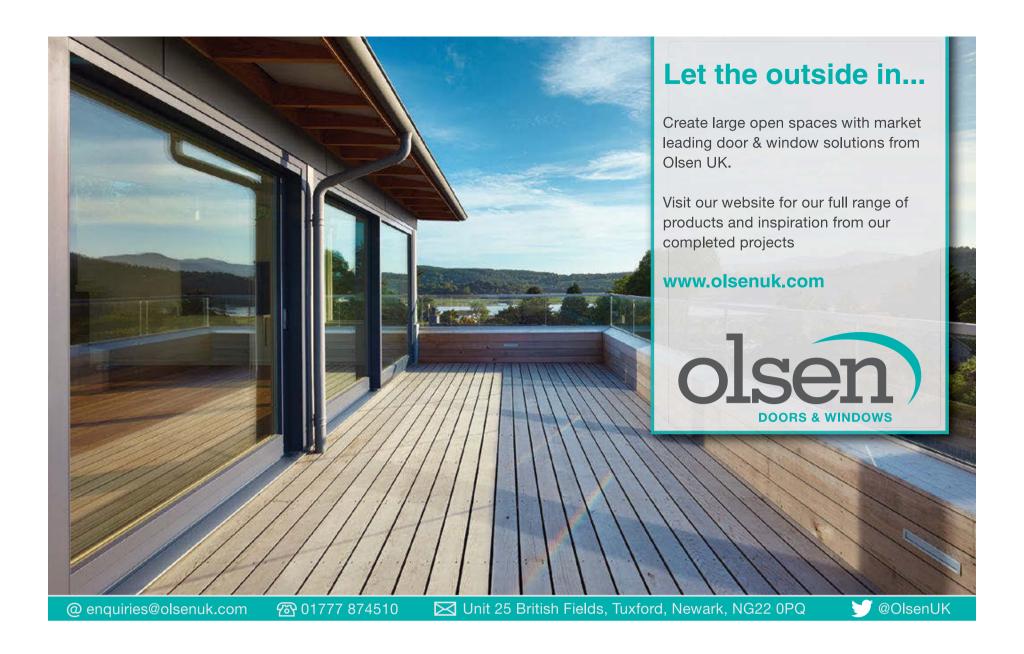
So is it a success? Architecturally, developmentally, yes — it looks great and is a thousand times better than what most commercial developers would have done with this great, rare opportunity. Does it work for the members of the group? Yes: the owners we met on the day seemed enthused, relieved and perhaps already a little fed up with questions about how this rather continental way of building homes has worked out. After all, when you think of it like a small development where you get to choose your friends and neighbours, and chip in for a bit of collective babysitting and shared gardening, then it sounds all ideal. Copper Lane puts a marker in the ground for this type of self-build — and it shows that cohousing, while definitely not for everyone, has a significant role to play in helping us meet our future housing needs in a much more imaginative way. •



Above: Interiors

Certain elements of the houses are fitted out collectively — with Douglas fir being the key material for the staircases, fitted furniture and flooring finish. The communal central space (shown TOP LEFT) is finished with a polished concrete floor







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HOMES COHOUSING SCHEME

The Project



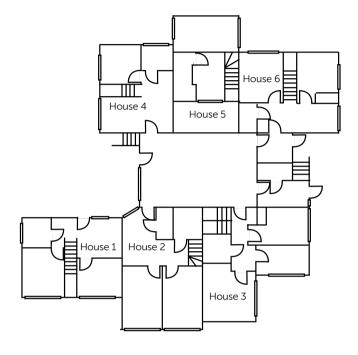
Simon Henley Architect Henley Halebrown Rorrison (HHbR)

THE ARCHITECT'S VIEW

We had an idea that an 'intentional' community might, in plan, look a certain way. The result 'clusters' the houses around a central space: it is as old as mankind, and works much like a campfire or a kitchen table. But this is a very particular arrangement that mixes two storey houses (east and west) with three storey ones (north and south), thereby reconciling the discrepancy between the orientation of the site and the path of the sun. The floorplan (RIGHT) shows the lower ground plan only, so that readers can get a sense of the site layout and the two distinct rows of three houses. The two rows of houses are also moulded to create gardens in the corners of the site, each distinguished by their aspect.

Each house is unique. In addition to the number of bedrooms, and the variety of workspaces needed by an artist, designer, psychotherapist and academics, the position of each house on the site affects its internal arrangement and the type and placement of windows. Curiously, three houses have kitchens on the middle floor, two at the top and one at the bottom. It's a bit like a school photo with some sitting on the floor, others on chairs, some standing and others on benches, peeking over the top.

Overall, sharing of the qualities of the site is a negotiated form of egalitarianism.



Lower Ground Floor Plan (Other floors not shown)

PROJECT TIMELINE

2006: Site vacated by nursery
 2008: Permission refused for new church
 2009: Site bought by the Copper Lane
 Group — HHbR appointed
 May 2011: Initial application for seven
 houses withdrawn
 Sep 2011: Revised submission for six houses
 Mar 2012: Permission received
 Jan 2013: Construction starts
 Jun 2014: Completion

SUPPLIERS

Architect Henley Halebrown Rorrison020 7033 9700	Ventilation system Ithoitho.co.uk Douglas fir timber flooring
Windows Olsen01777 874510	Reeve Flooring 01553 776835
Pearl Grey brick Wienerberger	Kitchen worktops Richlite (Black
wienerberger.co.uk	Diamond) richlite.com
Roofs Bauder Flat Roof	Flushglaze rooflights Glazing Vision
	01379 353741
Douglas fir internal staircases and fitted	Gutters and downpipes Guttercrest
furniture Tillytilly.at	(mill-finished aluminium)01691 663300

COST BREAKDOWN (SIX HOUSES)

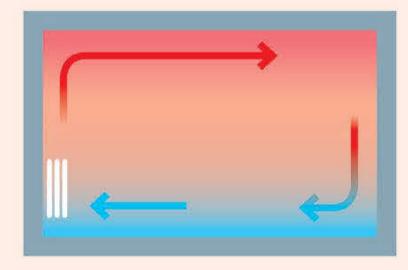
Substructure Frame and upper floors	£124,750 £266,750
Roof Stairs and	£87,550
walkways	£81,000
External walls,	£157,150
windows and	
doors	
Internal walls,	£26,500
partitions and doors	
Floor finishes	£51,025
Wall finishes	£100,457
Ceiling finishes	£38,450
Fixtures	£107,100
and fittings	
Services	£256,250
installations	
Site works	£67,000
Drainage	£37,500
Mains supplies	£32,500
Prelims	£271,000
Contingencies	£125,000
Total	£1,830,000



Here's the proof...

RENOVATIONAL SELF BUILD

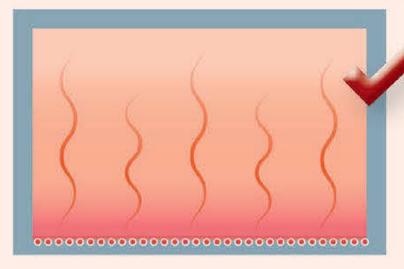
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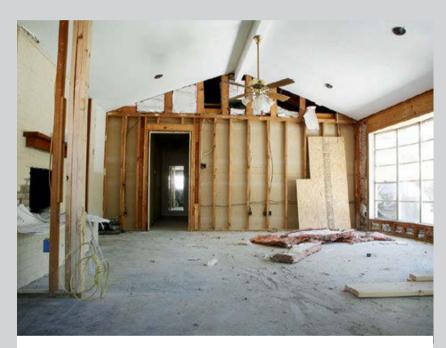
For me, Express do the best products at the best price, so I used them on every single Home Show project and then ended up using them on my own house. I have never gone anywhere else for bi-fold doors.

George Clarke, TV presenter and Architect



Building & Renovating

This section: All the practical expert advice you need to get your project underway



Advice

Top 25 Tips for Renovators P.102



Advice

Insulated Concrete Formwork: The Complete Guide P.118



Advice

Repairing Old Timber Floors P.125

Plus: → Contracts: Do You Need One? P.109

- **➡ Connecting Services to Site** ₱.129
- → Measuring Building Materials P.133
- **▶ A Self-build Schedule** P.136



"GET A BUILDING REPORT"

You should always commission a building report from a chartered building surveyor before buying. However, do bear in mind that a surveyor will not be able to uncover hidden problems and will not usually give an idea of the costs.

"BE PREPARED FOR A FIGHT"

When there is a lot of interest in a property it will often go to sealed bids. The estate agent will let you know the date and time in which all bids have to be in by. When submitting your bid you will need to provide a letter stating your final offer, along with your solicitor's details and ideally a mortgage offer in principle from your lender. Often it pays to write the letter to the owner of the house, setting out why you are a good choice — no chain, big deposit, etc. Include a little personal information too on why you want to buy the property and are a reliable choice.

"DON'T GET RIPPED OFF ON SURVEYS"

If you require a mortgage, your lender will insist on a valuation. If you also want a full structural survey, ask your lender whether your chosen surveyor is on their panel for valuation reports and, if not, if they could recommend one locally who is — it saves paying for two different surveys, saving £100s.

"HAVE A STRICT SCHEDULE"

Without a schedule the whole process can become chaotic, with tradespeople overlapping, and many jobs that could have been carried out at the same time to save on costs being undertaken separately.

A schedule lists what work needs to be done to the house, and in what order. In addition to having one schedule for the entire project, it is often

A schedule lists what work needs to be done to the house, and in what order. In addition to having one schedule for the entire project, it is often helpful to break a project down into phases, such as 'kitchen extension', 'moving bathroom upstairs', 'loft conversion' and so on, and have a schedule for each.

"BUDGET FOR NEW ELECTRICS"

Electrics in old buildings will often require updating — look out for old-fashioned fuse boxes, light switches, round pin plugs and fabric-coated flex. To rewire a typical three bedroom terrace measuring around 100m² will cost between £2,500-£3,000. This should include removing the old wiring, installing a new consumer unit and lifting and replacing the floorboards — it will not include replastering.

"LOOK FOR RADS"

A lack of radiators should alert you to the fact that there is no central heating system in place. Adding a modern heating system to a typical house will cost around £2,500-£5,000 — don't forget to add it to your budget.

"BE SUBSIDENCE SAVVY"

Subsidence does not always spell disaster. Indications of subsidence include big cracks that seem to have grown from smaller ones, particularly when they get wider and appear in the corners of window and door openings. Cracks that are more than 3mm wide on the exterior of a building should also raise the alarm. Look too for doors and windows that have begun to stick. The main issue with subsidence is that it will be hard to obtain buildings insurance — you will be left to either pay for any relevant treatment yourself, then get insurance, which in turn is likely to have a big premium, or to get the seller to make a claim against their insurers, allowing work to be carried out under their policy. All that may be needed is for trees to be removed or drains fixed. However if the building has already started to fail, underpinning may be required, which could cost

"BEWARE DAMP"

There are several causes of damp, with some more costly to fix than others. Damp is often obvious — water marks on floors and walls being tell-tale signs. Occasionally condensation will also be visible on walls and windows. Causes range from leaking gutters and blocked drains (which are fairly simple to put right) to inappropriate modern interventions, such as cement renders, concrete floors and injected damp-proof courses — all of which are a little more costly to put right.



Karndean Designflooring answer your questions...

Our daughter is just about to turn 13 and we promised we would makeover her bedroom for her birthday. Apparently teddy bears are no longer cool. Do you know of any floor coverings that might help offer noise reduction? Our front room is directly below her room and any protection from teenage strops and One Direction would be brilliant!

A Oh to be a teenager again... actually maybe not! Karndean's LooseLay has acoustic properties which can help reduce the noise levels heard in the room directly below the area it is laid in. So this could be the perfect solution for you. It comes in 19 different wood designs and eight tiles so there is plenty to choose from – we even offer two funky textile patterns.





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RENOVATION "WISH WE'D KNOWN"

"CHECK FOR ROT"

Make sure you're on the look out for rot — a fungus that can destroy timber. Rot appears in badly ventilated conditions and it is often found in the roof space or under floorboards in old houses. Look out for cotton wool-type masses and a strong musty smell when you lift the carpet. Getting rid of it will cost around £1,000. Wet rot is not so much of a problem, occurring in timber exposed to high levels of moisture.

"DON'T LET CRACKS SCARE YOU OFF"

Don't let cracks scare you off
— although people immediately assume all cracks are bad, they are not always a sign of subsidence. Cracks evident in just a single brick or in plaster by a window or doorway are not usually signs of a structural issue. However, more extensive cracks that seem to follow a pattern, such as through several bricks, can point to something more worrying.

"IS IT HABITABLE?"

If the property is unlivable, be aware that some mortgage lenders will refuse to lend on properties that are uninhabitable, while others will lend based on the current value of the house but then will not lend anything further until the project is complete — known as applying a 'retention' to the borrowing.

"DON'T RIP OUT GROUND FLOOR BATHROOMS"

Downstairs bathrooms are very common in old houses. To create a new bathroom on the first floor to replace an existing bedroom should cost around £1,500-£2,500 — but this will mean you lose a bedroom somewhere. On the plus side, if you are replacing or fitting a bathroom upstairs, a downstairs bathroom allows you to keep the facilities in use while the new one is fitted, plus plumbing and waste will be in place should you fancy a downstairs

"LOOK UP"

Broken or missing roof tiles, flashings or underfelt and worn pointing on the roof need to be noted. If just a few tiles need replacing, it will only cost a couple of hundred pounds, but if the damage is extensive, a new roof may be required — a job which will cost about £2,000-£3,000 for a typical three-bed house.

"GET A MEASURED SURVEY"

If you're planning on carrying out significant design work on the new property, make sure you get a measured survey (i.e. laser measures and scans of the property). It ensures the design is accurate and eradicates any element of guesswork.

"PREPARE FOR AUCTIONS"

Bidding at auction can be a daunting process — requiring quick decision-making and the acceptance that when the hammer falls, if you are the successful bidder, then there is no turning back. It pays to sit in on a few auctions first to get a feel for the process, and to thoroughly research the property before the auction, carrying out all the relevant property and land searches to avoid nasty surprises later. Plus a survey — all within the four to six weeks you'll get between the auction being announced and the bidding day. So, you must be prepared and able to commit a significant amount of money without being sure the property is yours, along with a 10% deposit for the day when the contracts will be signed, and the remaining 90% within 28 days. You'll need to commission the regular conveyancing work to check boundaries, titles, and raise questions with the vendor's solicitor, too.

"PLAN FOR LIVING"

If the property you buy is uninhabitable, you will need somewhere to live while you make it liveable. If you want to stay in your old home while the work is carried out, some mortgage providers offer an option whereby you have your own home valued upfront, and then the sales figures for your property are taken into account for your borrowing needs. Once you complete your renovation, or often just before, you'll then put your old house on the market. Once it sells, the final figures are worked out.

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RENOVATION "WISH WE'D KNOWN"

"IT'S DIFFICULT!"

Depending on the scale of the work you're carrying out, you should prepare yourself for a few practical issues along the way. Namely, an inevitable period of time when you're without basic services as a result of moving boilers, electrical meters, consumer units and so on (also, a common cause for delay at the start is dealing with utility companies, so plan ahead). Dust is the other thing that many people get fed up with — minimise it by sealing off areas of work in phases and leaving the momentous knock-through until as late as possible (i.e. keeping the work outside as much as you can).

"KNOW YOUR VAT"

Most suppliers will have to add 20% VAT to all quotes for anyone carrying out work to an existing home. However, if the house has been empty for more than two years you should be charged the reduced rate of 5%. Check out HMRC VAT Notice 708 for details.

"KEEP THE WINDOWS"

If you are renovating a house that has the original windows still in place – likely to be timber or metal – then do all you can to rescue them before you even consider replacing. Even if there is extensive damage, they can always be repaired — conservationists advise that, providing there is at least 50% of the original remaining, a window should be repaired rather

"GET INSURED"

Once you exchange contracts you become responsible for the site and you must therefore have adequate insurance. If you are taking out a mortgage to fund the project, your lender will not release any money without insurance being in place to cover calamity such as flooding, theft or fire to the property. Renovation insurance should include public and employers' liability, cover for building materials and works, the existing structure, accident cover and legal expenses.

"USE STRUCTURAL ENGINEERS"

If your project involves the removal of load-bearing walls, cutting into roof timbers, widening window or door openings or removing a chimney breast, then consulting a structural engineer is a very good idea and often essential. They will be able to advise you on the placement, size and type of steel beam required for the removal of walls, etc. Budget £500-£1,000 for a simple project

"CONSIDER A WARRANTY"

Warranties are not essential, but are a good idea. They will cover your house against flaws in the design, materials or build quality, along with any problems that occur as a result. Warranties usually run for 10 years and if you plan on arranging one, do it early on as the premiums escalate the further you get through the project.

"BEWARE THE COSTS"

You may need to pay some fees to get the house working again, such as reconnecting the water supply, cleaning out the septic tank, etc. Other fees which may surprise you include valuation fees (usually based on the value of the completed property) and, with some of the renovation mortgages, there may be a fee to pay before the release of each stage payment. Simply put, taking on an old property means dealing with the unknown. Which means unknown expenses, too.

"YOU DON'T ALWAYS NEED PLANNING PERMISSION"

You might not need planning. A significant number of renovation and extension projects won't need planning approval at all. These include internal improvements that don't affect the external look of the building and small extensions — these will be classed as Permitted Development, and you can find out exactly what type of project you can carry out at planningportal.gov.uk. (The Government recently completed a consultation on changing Permitted Development rights for some types of project including single storey extensions, but as yet has not decided an outcome). Other larger-scale extensions will require planning approval in the usual way.

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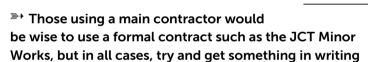
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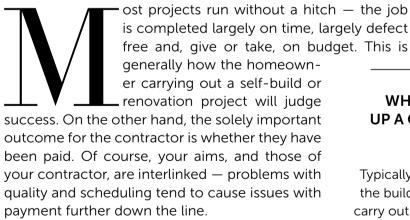
How to Form an Effective Contract

Ensuring that you have an enforceable agreement with your contractor (and designer) is an important insurance during a project. Chris Reeves explains how

THE QUICK READ

- **>>>** A contract is formed when there is an 'offer' to perform a service and a clear acceptance of that offer
- >>> The contract can take many forms as long as the offer and acceptance are clearly understood by both parties - from verbal agreement through to formal contract





All very well, but what happens when things go wrong? How do you mitigate for the project that veers off this course? The number of people suffering at the hands of their contractors is significantly below the reality (the bad projects tend to be talked about more) but it is important nonetheless to deal with potential pitfalls and for that, the first port of call is a contract.

A contract sets the rules about what is required in terms of time, quality and cost, and more. Contracts are legally enforceable, but without one, what are the rules? Without a clear understanding of the rules, how certain are we about the outcome of a dispute if it goes to court?



Chris Reeves is a solicitor who runs mediation services for building

disputes. He's also a former builder

a handshake. **Definition of a Contract** When considering whether there is a contract in place and what its terms are, the court will look for an 'offer' to do the work and a clear acceptance of that of-

Of course, one of the key things to ascertain is what a contract actually is -

what is the legal definition and what is the practical difference between a formal

contract, an exchange of letters or simply

fer. It's worth noting that any offer and/ or acceptance does not have to be in writing. Indeed, many projects start and finish on the basis of a verbal contract only you do not even need a handshake.

The court also requires 'consideration' — which is a concept that is easier to recognise than describe. Consideration is what each party is promising to do in return. In the case of building contracts, the consideration is the price to be paid on the

> homeowner's side in return for the contractor carrying out the work — or at least promising to carry out the work.

> The law also requires that each party to a contract must have the legal capacity to enter into it; some contracts must be in a particular form before they become enforceable - a good example of which is the transfer of land.

> Note that the courts will not consider enforcing any contract that includes illegal clauses. I once saw a letter from a contractor to a homeowner that went along the lines of: 'If you pay me in cash then I will not charge you VAT.' This would have nullified any formal proceedings in this instance.

An innocent party may also be able to avoid enforcement of a contract if they were duped into entering into it through fraud or a misrepresentation. The law will also make certain contracts void in circumstances where a cooling-off period has not been given, such as a contract made in your home with a contractor. One of the contractor clients I represent was »

WHAT MAKES **UP A CONTRACT?**

Offer

Typically the principle of the builder's proposal to carry out the work for you

Acceptance

Your agreement to the builder's offer. The offer should be made without undue pressure (i.e. giving you time to consider it) and include a cooling-off period

Consideration

Effectively the details of the offer - e.g. price, timescale and scope of the work to be carried out

PROJECT MANAGEMENT CONTRACTS

some form of

protection in writing

amazed to learn that as he had agreed the price for the job around the kitchen table he could not enforce payment in court as he had not given his customer a cooling-off period before starting work.

For a contract to be enforceable, the court will also want to be satisfied that the parties intended to create a legal relationship. In the context of building

work, there should be little difficulty in satisfying this test, but how about work done as a favour? How about the friend that draws up some plans but does not charge you for it, or the mate who helps out with some DIY?

Forms of Contract

The best practical way of formalising arrangements and offering some protection to the homeowner is to go for a tried and tested form of contract. There are many 'contracts' available, but the key to protecting what is important to you (presumably ensuring you get good-quality work within an agreed schedule for the price you were originally told) lies in not only selecting the right form but also ensuring that it is geared to your own project and covers you for any unusual risks.

The first question you should ask when looking to choose an off-the-shelf contract is: "who are the likely parties?" If the contract is between the homeowner and a builder who will be doing all the work, then you can consider one of the standard forms that the builders will be familiar with such as a JCT (Joint Contracts Tribunal) form of contract or the new form of contract published by RIBA (Royal Institute of British Architects). The JCT contract first appeared in 1903 in a standard form, the terms of which had been agreed between RIBA and the Chartered Institute of Builders — so it's safe to assume it is well balanced and has really stood the test of time. The JCT publish the Minor Works Building Contract, which costs around £25 plus VAT. The RIBA contract is the new kid on the block and is similarly priced — and as it's published by RIBA, it is likely to become popular.

All of this assumes you're using a main contractor to manage the whole project for you, which is only true in something like 40 per cent of all self-build and major renovation projects (the majority will use a main contractor for part of the project, or will use a package supplier, or the work will be carried out by the homeowner directly employing subcontractors).

In the case of the latter, the homeowner will need a contract for each of the subcontractors. The contractual side of things then becomes much more complex. The reason it is complex is that while you may have a contract with each of the subcontractors, there will not be any contract between each of them — and no contract means there are no rules and chaos can reign. The JCT publish a standard form of trade contract for engaging separate subcontractors, but the term 'subcontractor' suggests that each trade is operating under a 'sub' contract to a main form of contract between the builder and the homeowner mentioned above. The phrase 'subcontractor' is therefore not an accurate one to use in circumstances where the homeowner has decided to employ the trades direct — each trade is in fact a contractor in their own

right and each one needs a contract that is geared to the work being done.

How about the specialist suppliers

How about the specialist suppliers who rely on their own set of terms and conditions? If you give the go ahead to a supplier then the contract's terms and conditions will apply if they came with the quotation. Each supplier has to be thought of in the same way as a subbie

even if they are not fitting the goods being supplied.

Contracts for Design Work

Chances are you'll be paying your designer a significant amount of money for an agreed service, and as such you'd want to protect this arrangement in the same way you would if you were using a main contractor or individual tradesperson. You should agree with your designer a detailed contact in which both you and the designer are clear about what work is being done and when payment is due. Most projects have a clear set of milestones, such as the initial design brief, planning permission, detailed design and so on. These should always be outlined, along with the expected costs at each stage, in the initial correspondence.

If you're using an architect (as opposed to a non-RIBA house designer), particularly for supervision services during the construction, you are likely to be offered a standard form of appointment published by RIBA. The RIBA forms align with 'work stages' and the architect will price each stage so the homeowner will know what fees are being incurred for each. The RIBA form covers the situation where the project has to be abandoned at any particular stage, for example if an application for planning permission is not successful. RIBA publish the Domestic Project Agreement 2010 (2012 revision) which is currently priced at £20 plus VAT.

The next point to consider is whether the standard forms work for you. All the standard forms come with blanks to be filled in such as the commencement date, the price, the names of the parties and so on. You may also want to make some amendments to the terms to suit the particular project requirements. It certainly pays to get advice before signing up.

Email, Letter or Verbal?

Of course, the realities of a building project are that it is quite difficult to raise the issue of formal contracts with a tradesperson. The good news is that many jobs are happily completed on the back of an exchange of letters or other documents such as emails. Even for simple work packages I would always recommend that when embarking on a building project the homeowner goes for some form of protection in writing — and ensures that the terms are agreed before committing to an agreement. lacktriangle

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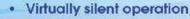


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BUILD COSTS

How Much Will My Foundations Cost?

David Snell helps you predict the budget for the most unpredictable element of the construction process



DAVID SNELL The author of Building Your Own Home, David is a 13-time self-builder and has been building homes for 50 years

oundations are the one element of a construction project that it is impossible to fully plan out until you start on site (as ground conditions and requirements vary), meaning budgeting this section of your build will be, at best, general. Most builders quote, without further information or instruction, on the basis of what is known as a deep strip foundation. This assumes a trench 600mm wide and 1,200mm deep for all external walls, and internal load-bearing walls with a minimum 225mm of concrete tamped level.

But, of course, even this simple standard assumes a dead level site and makes no provision for the disposal or dispersal of the excavated spoil. (On this note, you can save money by redistributing spoil on site for landscaping purposes.) As soon as you have a site with a slope, then steps have to be created in the concrete, and that means shuttering up in order to maintain the level surface of the concrete.

Although concrete is expensive, many decide from the outset to swap to a 'trenchfill' foundation, whereby the excavations are filled to within 200mm of the ground level. It means much more concrete but it gets you out of the ground in one day and negates the need for bricklayers and blocks below ground level. In unstable or wet conditions, that can be a real bonus and, in the end, the costs aren't much more.

The presence of trees, especially where the subsoil is clay, will crank up the requirements even further, with the possibility that trenches will have to be up to 3m deep. This is because trees affect the moisture content of the soil at lower depths and the fact that some clay soils expand or contract according to their moisture content. It is guite common for there to be a requirement for one or both sides of the trench to be lined with compressible material and for a slip membrane to be introduced. This may, therefore, necessitate a wider digger bucket being used.

COMPARING FOUNDATION COSTS

The following provides an indication of costs for a 7x10m building with one internal cross wall (and including labour, plant and materials), varied by foundation type:

Deep strip foundations

Excavate 30m³	£812.80
Bulked up to 45m³ loaded into lorries	£685.19
Soil disposal incl tipping charges	£1,125.00
Reinforcement mesh	£192.00
Concrete foundations 10m ³	£1,339.45
Total	£4,154.44
Trenchfill foundations	
Excavate 30m³	£812.80
Bulked up 45m³ loaded into lorries	£685.19
Soil disposal incl tipping charges	£1,125.00
Reinforcement mesh	£384.00
Concrete foundations 25m³	£3,349.64
Total	£6,356.63
2m-deep trenchfill foundations	
Excavate 50m ³	£1,500.00
Bulked up 75m³ loaded into lorries	£1,141.99
Soil disposal incl tipping charges	£1,875.00
Compressible material,	
slip membrane and positioning	£606.00
Reinforcement mesh	£408.00
Concrete foundations 45m ³	£6,029.35
Total	£11,560.34

(NB: With the costs for a pile and ringbeam system for a building such as this, running at £8,000-£12,000, it can pay to swap to such a system from a dug foundation.)

FIND OUT MORE OVER THE PAGE

■→ The Build Cost Calculator

The Build Cost Calculator

A simple cost-estimating guide for people building their own home

BUILD ROUTE A

ne of the most important aspects when planning your self-build or home renovation/extension project is working out how much it is going to cost.

This figure will depend on the size and shape of the house, the level of your own involvement, where in the country you intend to build, and the materials you're going to use. If you can make even rough decisions about these factors, then you can begin to work out how much it is going to cost.

As a very general rule of thumb, expect a building plot to cost between a third and a half of the end value of the finished house. The costs of building a house will then depend on the variables listed above. All building work is usually quoted on a cost/m² basis. For example, a typical new four bedroom self-built home is around 200m² (with 100m² on two sto-

reys) and usually varies between £900-£1,500/m² (although self-builders achieve costs between £300-£3,000/m²).

Renovation costs are more difficult to establish as they involve many variables, but allow at least £1,000-£1,300/ m^2 for work. This, added to the cost of the plot/house and with a 10-30 per cent contingency, should result in less than the final end value of the house.

The table below, based on information from the Build Cost

BUILD ROUTE C

Information Service (part of RICS), is updated monthly to help you work out a more accurate estimate (note, however, that these figures are for build costs only and do not account for VAT, which is not charged for self-build projects). There is an interactive online version at homebuilding.co.uk/costs, which guides you through the process.

BUILD ROUTE D

HOW TO USE THE TABLE

Identify your build route from the four options;
 Identify your expected level of specification: 'standard', 'good' or 'excellent';
 Identify the estimated size of your finished house (either single or two/more storeys);
 Choose your location;
 Multiply the figure by your house size

BUILD ROUTE B

		DOILD	NOOIL	- ^	(Subbies)		BOILD ROOTE C		(Main Contractor)				
		(DIY + Su	ıbbies)				(Builder/Subbies)						
SINGLE STOREY		Standard	Good	Excellent	Standard	Good	Excellent	Standard	Good	Excellent	Standard	Good	Excellent
>90m²	Greater London	1185	1371	1649	1255	1452	1746	1324	1532	1843	1394	1613	1939
	South-East	1039	1203	1446	1100	1273	1531	1161	1344	1616	1222	1415	1701
	NW, SW, East & Scotland	945	1094	1316	1000	1159	1393	1056	1223	1470	1112	1287	1548
	Mids, Yorks, NE & Wales	904	1046	1258	957	1108	1332	1010	1169	1406	1063	1231	1480
91-160m ²	Greater London	1085	1317	1711	1149	1394	1812	1213	1472	1912	1276	1549	2013
	South-East	952	1154	1500	1008	1222	1589	1064	1290	1677	1120	1358	1765
	NW, SW, East & Scotland	866	1051	1366	917	1133	1447	968	1174	1527	1019	1236	1607
	Mids, Yorks, NE & Wales	828	1005	1306	877	1064	1383	926	1123	1460	975	1182	1537
161m²+	Greater London	966	1267	1590	1023	1342	1683	1080	1416	1777	1137	1491	1870
	South-East	847	1111	1394	897	1176	1476	947	1242	1558	997	1307	1640
	NW, SW, East & Scotland	771	1011	1270	816	1070	1344	861	1130	1419	907	1189	1494
	Mids, Yorks, NE & Wales	737	967	1213	780	1024	1285	823	1081	1356	867	1138	1427
TWO STO	OREY												
90-130m ²	Greater London	1140	1319	1620	1207	1397	1716	1274	1474	1811	1341	1552	1906
	South-East	1000	1157	1421	1059	1225	1505	1118	1293	1589	1177	1361	1672
	NW, SW, East & Scotland	910	1053	1294	963	1115	1371	1017	1177	1445	1070	1239	1523
	Mids, Yorks, NE & Wales	870	1007	1237	921	1067	1309	972	1126	1382	1023	1185	1455
131-220m²	Greater London	960	1163	1474	1017	1231	1561	1073	1299	1648	1130	1368	1735
	South-East	843	1020	1293	892	1080	1369	942	1140	1445	991	1200	1521
	NW, SW, East & Scotland	766	928	1177	811	983	1246	856	1038	1315	901	1092	1384
	Mids, Yorks, NE & Wales	733	887	1125	776	939	1191	819	992	1257	862	1044	1323
221m²+	Greater London	886	1134	1424	938	1201	1508	990	1268	1591	1042	1335	1675
	South-East	778	994	1250	824	1053	1323	869	1111	1397	915	1170	1470
	NW, SW, East & Scotland	707	905	1137	749	958	1204	790	1011	1270	832	1065	1337
	Mids, Yorks, NE & Wales	677	865	1087	716	916	1151	756	967	1215	796	1018	1279

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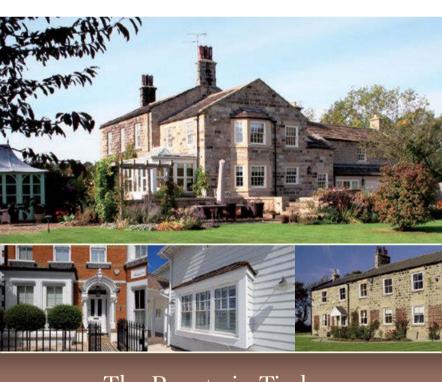
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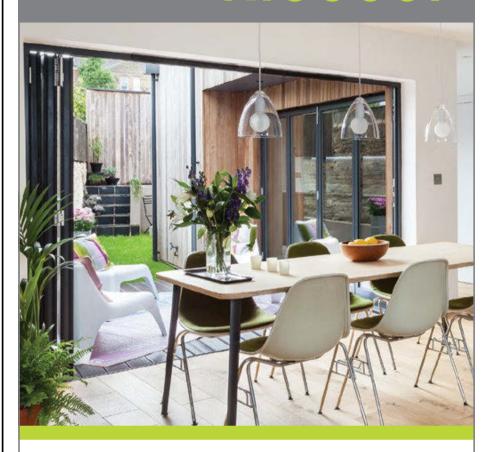
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PROJECT PLANNER EXTENSIONS

Extension Project Step-by-Step Planner

What does a typical extension project look like? What are the critical paths and construction schedule? Here's our week-by-week guide and checklist

BEFORE WORK STARTS

- Find trades, obtain quotes and inform them of your schedule
- ⇒ Check lead-in times for materials to avoid delays
- → Advise Building Control of commencement
- **>>→** Arrange/amend insurance
- ⇒ If living on site, put measures in place to keep the building work separate from your living spaces
- Arrange toilet facilities for trades if necessary



PREPARATION WORKS

- ➤→ Ensure clear access to site
- **■→** Have bricks,

blocks and associated materials delivered to site and stacked in place

- ⇒ Hire mixer and digger this is only necessary if you are project managing, otherwise your builders or contractors will organise this on your behalf
- ⇒ Ensure the site is safe, particularly if you have small children



GROUNDWORKS

- **⇒→** Builders arrive on site
- → Groundworkers dig foundations
- **⇒** Building Control visit to approve the foundations
- Reinforcement laid within foundations, if required
- **>>** Pipework, drainage or services laid within foundations
- → Concrete footing poured and levelled
- **■→ Building Control visits to approve**



SUPERSTRUCTURE

- ⇒ Bricklayers to build up to dampproof course

and trenches dug for associated pipework

- ⇒ Insert concrete lintels into brickwork if a drain run requires it
- **>>>** Sand is then laid before damp-proof membrane is put down
- **>>>** Concrete slab poured
- → Arrange for Building Control inspection



EXTERNAL WALLS BUILT

→ Check that the required materials

are on site for the superstructure to commence, including lintels, door and window frames and wall ties

- ⇒→ Whether the brickwork or blockwork is built first will depend on your builder, but work now starts on the superstructure
- **>>** Cavity wall insulation fitted
- >>> Wall ties inserted to fix the new walls to the existing
- **>>>** Lintels for windows and doors fitted
- ⇒ Door and window frames should be inserted as the walls go up



INTERNAL WALLS BUILT

- → Internal walls are constructed
- → Order materials

such as windows, roof tiles, etc., which can sometimes have long lead times of up to five weeks

⇒ Check that the carpenter is all set for the following week and all materials are ready — including lead



ROOF STRUCTURE

- → The carpenter will start building the roof structure
- or in some cases prefabricated roof trusses may be used
- ⇒ If you are having rooflights, the carpenter is usually in charge of fitting these at this stage
- → Dormers will be constructed if they are being introduced



ROOF COVERINGS

→ Roofing membrane is laid over

the newly built rafters

- ⇒ Roof battens cut and fitted over membrane
- **■→ Tiles/slates laid**
- ➡ Ridge/hip tiles laid and bedded
- >> Valley tiles laid, along with finishing details, flashings, etc.
- → Fascias, soffits and verges primed/ stained/painted
- → Floor screed laid

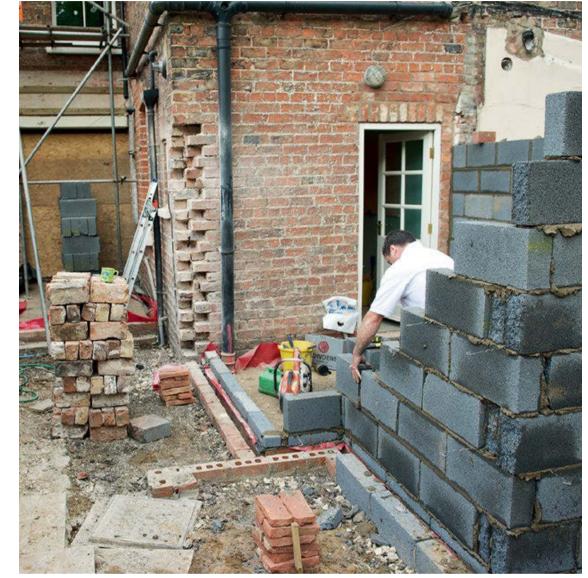


WINDOWS AND DOORS

- ⇒ External rendering if required
- ⇒ Windows and doors fitted into linings and frames that were (hopefully) put in place when walls were being built
- **>>** Guttering and downpipes fitted
- ⇒→ First fix carpentry, plumbing and electrics
- → Studwork walls built, door linings fitted and pipes boxed in

Right: Superstructure

The trick with building extensions is to delay breaking through to the existing house to as late as possible in the build schedule. Here, existing bricks have been removed ready to take the new junction



AGE : JEREMY PHILLIP

10

BREAKING THROUGH

Now is a good time to ensure you get sealed off from

the building work as things will get messy

⇒→ Steels are put into place, along with padstones — sizes should have already been approved by Building Control ⇒→ Joins made good

WEEK

PLASTERING

>> Walls are boarded, with insulation placed between battens on

existing un-insulated external walls

⇒→ Plastering — followed by a period of drying out (around a week before decorating can begin)



SECOND FIX

⇒→ Second fix electrics carried out (sockets made live,

switches put in place, lights fitted, etc.)

- ⇒ Second fix plumbing (taps, connections, etc.)
- ⇒ Flooring laid (sometimes people choose to lay flooring after the kitchen is fitted)
- **⇒** Kitchen units installed (if this is a kitchen extension)



SNAGGING

⇒ Leaks, electrical problems, heating system issues, sticking

doors and windows — report them all to the relevant trades as soon as possible after finishing $oldsymbol{\Theta}$

Extension Checklist

Make sure your project runs smoothly with our handy 'don't forget' checklist

- Obtain planning permission, if required, prior to works commencing
- Submit application to your local Building Control
- Arrange access for delivery lorries and consider where skips can be placed
- **■→** Get quotes from trades
- If living on site, arrange schedules to minimise impact on day-to-day living
- Agree timescales and schedules with trades to avoid delays on site
- Arrange or amend insurances as necessary (you may need a new policy)
- Inform neighbours of work commencing
- Organise the hire of plant, toilets, etc.
- ⇒ Set up accounts with your local builders' merchants

- Theck lead-in times for materials and order where necessary
- Notify Building Control that you are commencing works
- Make space available to store materials safely on site
- Make sure water will be available for cement mixer (and later plastering) where it will cause minimal mess inside
- Arrange scaffolding if required
- Make second fix decisions (such as the position of lights and sockets) as early as possible
- Build in time for plaster to dry out before decorating commences
- Make sure plasterers and other trades know if you are carrying out aspects of their jobs on a DIY basis

N.B: This schedule is based on a single storey extension





INSIGHT

How Awesome is the Lego' Build System?

Insulated concrete formwork has been the next big thing in walling systems for a long time. Mark Brinkley discovers that it's not all child's play



MARK BRINKLEY Mark is the author of The Housebuilder's Bible and an experienced builder; he's just bought another plot

THE QUICK READ

- >> Consisting of lightweight polystyrene forms that easily fit together on site to create a structure, which is then filled with concrete, insulated concrete formwork (ICF) has been around since the 1970s, but only enjoys a modest niche in the UK
- >>> It offers excellent insulation and airtightness performance, and overall costs compete with more mainstream walling systems
- >>> There are several different types of ICF system, and on-site construction requires training

ousebuilding in this country is often framed as a choice between on-site masonry construction and off-site, factory-built timber frame. But the reality is a little more complex. There are systems which, while nominally one or the other, don't much resemble either of the mainstream formats.

Insulated concrete formwork (ICF) is one such system. Because it uses large amounts of concrete, it's very much in

the territory of masonry construction and it's also very much an example of onsite building. The only elements made in a factory are the insulation moulds, which are erected on site and then used as formwork that the concrete is poured into. But the build process is quite unlike traditional masonry construction and the skill set required is more akin to carpen-

ICF is perhaps the ultimate Marmite construction system

try than blocklaying. ICF construction is really rather different from anything else you are likely to come across. And it has many things going for it that particularly appeal to self-builders or those taking on extension projects.

History of ICF

ICF was first developed in the 1970s in Germany and has been successfully used all over the world, from the hottest to the coldest climates. The system is particularly popular in North America, where there are over a dozen substantial manufacturers building a combined total of around 15,000 homes a year. The first ICF homes appeared in the UK in the 1970s, but their uptake was relatively slow, largely because there is already a strong masonry build sector in this country.

For many years one company, Beco, acted as a standard bearer for ICF in Britain, and its product, Beco Wallform, is based on one of the main German systems, Isorast. As the British ICF market has developed, there have been a number of newcomers to the UK, often working in partnership with a North American business. You can find out more about the individual businesses via the UK trade body, the Insulating Concrete Formwork Association (icfa.org.uk). Further research will turn up a few rather grainy videos on YouTube, which give you a feel for what is involved in constructing an ICF house (visit homebuilding.co.uk/icf for more).

Just for clarity's sake, ICF is recognised as a standard form of construction by the Council of Mortgage Lenders for mortgage purposes, and is accepted by the major warranty providers (including NHBC). The documentation can all be found on the icfa.org.uk website.

Who Builds with ICF?

Over the years, ICF has developed a reputation for being of interest mostly to customers who appreciate high quality

> and low running costs over and above reduced building costs. This remains as true today as it did 20 years ago, when building standards generally were much lower. It was felt at the time that as the call for greater energy-efficiency levels increased, the disparity in cost between ICF and conventional masonry builds would diminish. But as we approach >>>



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Jonathan Barnett, of the well-regarded ICF business Logix UK, commented: "Our self-build sales are going well — it's just speculative developers who are now ignoring it. This is because it is still a little more expensive than standard Building Regulations' housebuilding methods, but if you want to build to the same quality, the price difference disappears."

What are the Pros and Cons?

ICF is perhaps the ultimate Marmite construction system. The system has its fervent advocates; people who have trouble comprehending why the whole world doesn't use ICF for everything. And it has its detractors, who can't understand why anyone would want their home to be constructed from polystyrene and readymixed concrete - such unlovable materials.

Jean Marc Bouvier runs the UK arm of Nudura, a Canadianbased business that sells its unique folding ICF blocks all over the world and, incidentally, does a lot of business for housing associations and care homes — where the owners have a vested interest in ensuring low long-term running costs. "The Green Building Council has stated that the UK's housing stock is among the least energy efficient in Europe, and is responsible for nearly a quarter of our annual carbon emissions. Yet we are the slowest market in the world to pick up on the benefits of ICF," he says. "Why we keep on building with cavity walls when ICF is just way superior, I do not know; they are quick and easy to construct and the finished standard is much higher. You don't get problems with damp penetration or mould, you get fabulous airtightness levels built in and whatever insulation level you require is easily accommodated. All with a much thinner wall thickness."

So what's not to like? Detractors point out that ICF is not nearly as simple to construct as its advocates make out. With all the systems, the concrete pour is an absolutely critical phase. The readymixed concrete has to be right in order for the concrete to flow evenly throughout the formwork; the support and bracing on the polystyrene blocks also has to be adequate or there is a risk of the walls distorting or even bursting open at pressure points. Mistakes can happen and, because of the speed involved, they can appear to be quite alarming, but an experienced hand can generally fix any mishaps within a few minutes.

There are also many things to know about fixing joinery, pipework and cables, not to mention installing the junction details between walls and roof and internal floors. To the seasoned ICF builder, these are bread and butter matters no different to what cavity wall builders or timber framers experi-

ence, but to someone new to ICF, they can appear to be daunting hurdles to overcome. There is, in fact, a fair amount of specialist knowledge needed to build well with the system and there aren't that many experienced ICF builders around.

The way to address these issues is, of course, to offer training, and ICF busiWith all the systems, the concrete pour is a critical phase



Above: The Concrete Pour

Nudura offers courses to builders and self-builders to help with installation. The cavity between two 67mm EPS (expanded polystyrene) insulation panels, connected together by a folding web design (to allow for easier storage and delivery) is reinforced with steel and then filled with concrete

nesses are invariably keen to educate their customers. Nudura, for instance, won't even contemplate a sale to a customer if they haven't attended one of its one-day training courses and been to a site to witness a pour in action. "It is absolutely vital that someone on site has a good working knowledge of how our system works," says Bouvier. It is a tacit acknowledgement that, while it all might look as simple as Lego, building with ICF is not child's play.

Is ICF Green?

You would expect any low-energy house to be thought of as an eco house, but not everyone agrees. Lloyd Alter of Canadian E-zine Treehugger is one such critic. He wrote: "ICFs are serious architectural overkill — the upfront carbon load is astounding, and at the end of their life they are good for nothing but landfill. ICFs are energy efficient for the occupant, solid and strong, and useful for foundations. However, I think we are past the point where anything that saves a little money on heating is called green — the issues are bigger than that

now. In such a world, polystyrene and concrete sandwiches are not green."

But is this a fair comment? In terms of carbon footprint, concrete doesn't rate very well but it actually uses less energy in its production than either brick or aerated blockwork, its main competitors in this country. And polystyrene may indeed ***

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be a product of the petrochemical industry, but its main purpose here is to enable us to use less of such products. Its so-called carbon payback time is very short.

As for the argument that it's not recyclable at the end of its life, Jean Marc Bouvier takes a very different line. "Firstly, we are seeing more and more recycled material going into both the polystyrene elements and the concrete. And as the lifetime of our homes is measured in centuries, not decades, it should be a very long time before we have to worry about end of life disposal," he says.

Product Differences

At first glance, you might think that all ICF systems are much the same and that you might be able to select one over another by comparing prices. In reality, the ICF build systems available in the UK tend to be quite different from one another, and it makes comparison very difficult. They are all based around the idea that the insulated formwork is put in place,

Ideally, select and work with a supplier through the detailing phase of the design

secured and braced, before the readymix pour takes place, but the forms themselves vary markedly in their size and formats, and the steelwork that is required to provide long-term stability to the walls is handled very differently, too. Different manufacturers also seem to have very different ways of handling the ancillary details, such as connecting walls, floors and roofs, and placing joinery.

This makes it hard for a prospective ICF builder to know quite where to start. What you don't want to do is draw up detailed plans of how you want to build your house and then start asking ICF suppliers to quote. Ideally, you want to start talking with ICF suppliers much earlier in the process and select and work with one through the detailing phase of the design. Just as would-be PassivHaus builders are advised to start the design process with the intention of building to PassivHaus standard, not to think about it as an afterthought, so it is with ICF builds. Perhaps not coincidentally, ICF is usually a very good way of building to PassivHaus standard as ICF homes are inherently airtight, tend to have few cold bridges and the insulation levels can be readily adjusted to accommodate almost any wall U value.

THE SELF-BUILDER'S VIEW



Gill Meller – Head Chef at the River Cottage – is extending a house in Devon using an ICF system from Nudura. He shares his experience so far (you can follow his blog at homebuilding.co.uk/classof14)

To my mind it's highly cost-effective and very quick to construct. One of the best things about it is that rain does not stop play — it can be built in any weather. My builder went on a one-day course to pick up installation tips and this was enough for him to be up to speed.

The end result is likely to be super energy efficient, with the capacity to reach PassivHaus standards of insulation. It's lightweight, very practical and easy to combine with internal works — for example, second fix runs can be traced through the polystyrene. Also, a purpose-designed joist hanging system makes roofing construction easy.

One tip I would pass on is to make sure your architect designs the building with ICF dimensions in mind — it makes it much easier when it comes to the build. On site, you need to prepare well for the pour — it's an exciting day.

Alternative ICF Systems

Not all ICFs are based around using expanded polystyrene as the formwork. Velox ICF formwork is made from recycled timber, which is chipped and mineralised before being mixed with cement to make a sturdy, weather-resistant chipboard-like substance. Polystyrene is still used, but with Velox it is placed inside the cavity at thicknesses between 50mm and 200mm, depending on what level of insulation is required.

The Velox build system originates from Austria and is now produced in six factories across Europe. Surrey builder Marek Simoncic has brought it to the UK and has spent several years getting the necessary third-party approvals required for warranties and a mortgage. "One of the advantages of this kind of ICF is that it takes fixings very easily," he says. "You can place a screw anywhere and don't have to worry about the loadings. And because it's a very rigid system, and it comes with integral flooring, it makes it straightforward to get very high airtightness levels. It's an easy way to build to PassivHaus standard."

Durisol is another woodfibre ICF. It differs from Velox in using blocks instead of small panels, but the basic principle remains similar. Durisol has been manufactured globally since the 1940s and at a plant in Wales since 2008. lacktriangle

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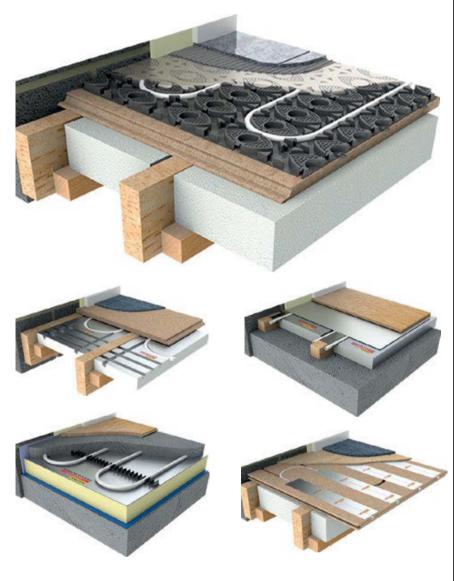
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OLD HOUSE MADE GOOD

The Trouble with Old Timber Floors

From springy floors to creaky boards, timber floors can throw up a whole host of problems, both major and minor, during a renovation. Ian Rock investigates



IAN ROCK
Chartered surveyor Ian Rock MRICS
is the author of eight popular
Haynes House Manuals, including
the 'Period Property Manual', and
is a director of Rightsurvey.co.uk

ne of the great joys of a renovation project is peeling back an old carpet to discover an original floor underneath that's crying out to be restored. Even homes built as late as the 1960s and '70s may harbour pleasant surprises such as pine floorboards with potential for stripping or, better still, hardwood parquet flooring gracing hallways and reception rooms. But old floors can, of course, also sometimes conceal less delightful surprises.

Solid or Timber Floor?

In houses of all ages, the floors upstairs generally comprise some form of timber joist and board construction. From the 1970s, chipboard panels started to replace softwood boards, which in turn had superseded earlier hardwood. But when it comes to ground floors, these might traditionally have consisted of little more than a few flagstones or bricks placed directly over the soil.

The Victorian era saw the widespread introduction in mass housing with suspended timber floors, alongside rudimentary solid floors in hard-wearing areas such as kitchens and hallways. This winning combination persisted well into the 1930s, with solid concrete predominating throughout the second half of the 20th century, until the advent of the modern 'beam and block' suspended concrete floor in the late 1990s.

Of these floor types, the one which tends to give surveyors sleepless nights is the suspended timber variety — largely due to the potential risk of fungal decay and beetle infestation, which in extreme cases can lead to collapse. So it's worth taking a moment to reflect on how these floors were built. A typical example might comprise joists supported every 1.8m or so resting on timber wall plates over brick 'sleeper' walls or posts (known as piers). Joists might be sized about 200x50mm and capable of spanning around 3.6m without support. To reduce

THE QUICK READ

- → Old homes may possess timber or solid (tiles laid on bare soil, or concrete) floors usually a combination of both
- → A lack of ventilation beneath a timber suspended floor and/or damp can be major causes of problems
- ➤ Excessively 'springy' floors (think ornaments vibrating with passing steps) could be a sign of a structurally unsound floor investigate it early on in renovation work

the risk of damp and timber decay, a good flow of air under the ground floor is important, so short brick sleeper walls were built in with a 'honeycomb' pattern; the gaps allow air to circulate. The air enters via small vents or airbricks sited in the lower walls.

Repairing Floorboards

One of the most common defects (and one of the most annoying) is the odd loose or creaky floorboard. Probably the worst offender is notoriously 'squeaky' modern chipboard, although this usually just needs screwing down to remedy the problem. However, before reaching enthusiastically for the toolkit, bear in mind that concealed pipes or cables may run beneath the surface; a metal and cable detector is a wise investment.

One of the most common causes of creaking is where floor-boards have been cut and lifted up (usually to run central heating pipework within the floor), but have not been properly supported when repositioned. To secure the loose end of a floorboard, a new batten should be screwed alongside the old joist, extending it under the unsupported board which can then be firmly screwed down on top. Boards also sometimes warp. The surface of twisted boards can be levelled by planing or by using a floor sander, once the original nails have been driven well below the surface. Do note that woodscrews are more effective than nails at pulling a board back against its joist.

Floorboards in most old houses will also likely show signs of past woodbeetle activity. Although normally superficial, in extreme cases wood-ridden boards can become soft and collapse underfoot, so the odd length may need replacing. Weakened or damaged boards can also be reinforced with a length of new board fixed underneath, spanning between the joists.

OLD HOUSE MADE GOOD REPAIRING TIMBER FLOORS

Excessively 'Springy' Floors

In most suspended timber floors a small amount of spring is normally apparent, particularly in upstairs rooms. However, excessive springiness – for example where nearby furniture and ornaments vibrate as you walk past – can be indicative of more serious underlying problems, and there can be many a cause too.

Some defects date back to the time of construction. In cheaper period houses or in poor-quality modern extensions the joists may be undersized or unbraced, where the original builders skimped on materials to save money. Similarly, the joists may be spaced too far apart, or the span might be a little too ambitious. Most commonly, however, the cause is down to more recent botching — where joists have been weakened by deep notches cut in them to run pipes and cables. The basic rule for cutting is that notches should not exceed one-eighth of the depth of the timber and electric cables should be run in small holes drilled more or less centrally.

Other causes may be down to the removal of load-bearing walls underneath, leaving joists unsupported, or the timber may have been weakened by beetle boreholes or the rotting of joist ends. Springy upper floors in older houses could also be due to old structural movement where walls have bowed out and parted company with the joist ends. With ground floors, the joists rely more on sleeper walls or brick piers supporting wall plates underneath, and these may have settled or are insufficient in number for the span.

So what can be done to remedy this issue? Where floors suffer from being overly springy and weak, they can normally be stiffened by wedging blocks of wood known as 'noggins' inserted between the joists. Fitted at right angles these should brace the joists either side to stop them moving sideways and 'flexing' (typically there are two lines of noggins about 1.5m apart crossing a room, or at least one at mid span). Where notches have been cut for pipes, joists can be stiffened by attaching straps or metal plates alongside.

In severe cases it may be necessary to strengthen the floor by installing additional joists bolted alongside the existing ones. If the joists are too few, then one can be added in-between each existing pair. For added strength these could be wider than the originals (or deeper, if you don't mind replacing the ceiling). Or you could perhaps install a substantial supporting beam — or a boxed-in steel — at mid span under the ceiling below.

If the cause is due to supporting walls having been taken out, urgent structural repairs are likely to be needed and a structural engineer consulted. Defective or missing sleeper walls or brick piers under ground floors will need to be rebuilt or strengthened.

Where main walls have bowed out, steel 'shoe' joist extenders can re-establish the connection between the joists and the wall. Alternatively, joists can be tied back in and strengthened by inserting steel 'helical bars' through the wall from outside and bedded in resin.

Rotten or Infested Floor Timbers

Soft, spongy floorboards underfoot in one or more areas and damp smells are typical symptoms, and common weak points include the sides of chimney breasts or by the main entrance doors where damp has been allowed to penetrate over time.

But the most common cause of decay or woodbeetle in timber ground floors is due to dampness aggravated by a lack of subfloor ventilation. In Victorian houses the joists were traditionally built into pockets in the main walls; so if walls are persistently damp the joists can eventually start to rot. This is particularly the case in locations very exposed to wind and rain (or leaks), where pointing is badly eroded, or where inappropriate modern cement mortar has trapped damp in old solid walls. Even where the joist and wall plates don't touch external walls, debris may have fallen down and bridged the gap.

Suspended timber floors to kitchens and bathrooms can be particularly at risk from hidden plumbing leaks and condensation behind fitted units, too. Other sources of damp include defective water supply pipes run in from the street under the house. There may be an insufficient number of airbricks for air to flow freely under ground floors, or the airbricks may have been sealed or rendered over in a misguided attempt to prevent draughts. A lack of ventilation can permit a build-up of dampness, eventually leading to fungal decay and woodbeetle attack. Where the house has an extension or conservatory with a modern concrete floor, there should be ventilation ducts extending through the new floor to the new outside wall.

To remedy the problem, begin by lift boarding over joist ends or spongy areas, checking their condition and resolving the cause of any damp. Rotten wood should be cut out and remaining timbers treated. Once dried out, new treated timbers can be fitted. Joist ends in walls should be protected with a DPC (damp-proof course) or new joists hung from steel hangers.

Clear any blocked airbricks, replace damaged vents, or fit additional terracotta or plastic airbricks. Where an extension has blocked off old airbricks, it may be possible to improve airflow by fitting 'periscope' vents channelled to the exterior.

Sloping Floors

In older buildings it's not uncommon, with time, for floors to slope in tune with settlement of the main walls, and this is not usually a concern. Sometimes large gaps are also evident to skirting boards, or there's a pronounced unevenness or a hump in the floor.

Internal walls that support floor joists often had little in the way of foundations and may have settled more than the main walls, or joists may have warped under the weight of heavy furniture over many years. Where a floor surface has a distinct hump or ridge, it may be due to the joists having settled either side of a supporting beam underneath (e.g. a new steel).

If the settlement is old, no attention may be necessary. Otherwise, repairs are the same as those for springy floors, with noggin bracing struts fitted between the joists and with the screwing down of any loose boards. Humps in the floor are not normally a serious problem either, but can be improved by lifting the boards and packing the joists to make them level. •

IN NEXT MONTH'S ISSUE

■→ Part Two: Our Guide to Repairing Old Solid Floors



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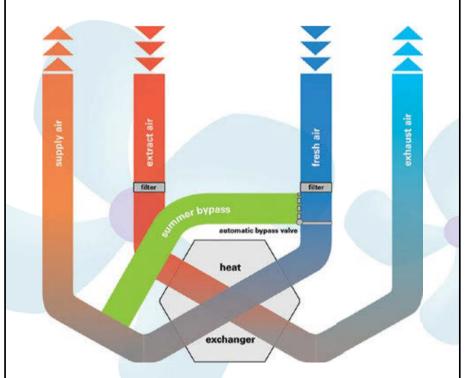
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PLOTS & PLANNING

Connecting Your Site to Services

What are the implications of buying a building plot (or rundown house) that isn't connected to water, gas and so on? David Snell explains



DAVID SNELL

The author of Building Your Own Home, David is a 13-time self-builder and has been building homes for 50 years

THE QUICK READ

- There are no fixed charges for the supply of new connections of the main utilities (water, electricity, drainage), with prices dependent on the region you're in and the distance from the mains supply
- Independent provision of sewage treatment and fuel is quite commonplace (some four million homes in the UK are not on the gas network), with prices relatively modest
- >>> Try and use the time between having your offer accepted and completing the purchase to get quotes from suppliers

any individual building plots and, on occasion, derelict homes, will need connecting to the key utilities in order to become viable. The implications in terms of cost and upheaval to the build process will vary depending on how far you are from the mains and the utility in question. (Some four million homes in the UK happily exist away from the mains gas network without major

disadvantage). The problem is that, as most people who have been through the process will testify, it appears that the provision of services is largely a lottery, with no publicly available scales or tables of charges. No site will experience the same conditions; every house is a different distance from the supply. So how do you begin to factor in the costs?

If you've got to cross a road, this will increase the costs

If you've got to cross a road to create a connection, then this will increase the costs and the timescales. In some cases it may even be impracticable and alternatives will have to be investigated. Certainly, new innovations are making the provision of on-site power more sustainable. And on-site sewage disposal has reached levels that make it feasible for even suburban plots where there is no viable alternative.

The costs included in our guide below are based on three recent case studies, but they can only ever provide a rough guideline for your project.

Water

You can't build a house without water and you need to ensure that a supply to a butt is available before work commences.

If the timings don't work out for a mains water supply to a standpipe and you need to start work (it can take months), there's always the option of hiring a bowser. Alternatively, a chat with a friendly neighbour, plus an agreement to pay for the extra water, might mean you can run a hosepipe from their house to the plot.

It's also worth noting that a standpipe must be connected by a plumber who is able to issue a WIAPS (Water Industry Approved Plumber Scheme) certificate.

WATER CONNECTION COSTS

Connection charges	£1,353.08
Standpipe	£268.14
• 25mm pipe	£15 per 25m roll
● 32mm pipe	£37.31 per 25m roll

Foul and Surface Water

Most sites will have their sewer connection in the Highway and any work within the Highway must be carried out by an approved contractor. Your own contractor or builder can take things to

the boundary, but no further, although, in some cases, it may be possible if the connection is in the verge.

If a partial or full road closure is required, the costs will rise, along with the timescale as notice will have to be given.

If your site does not have a sewer connection within close range, an off-mains solution is required (in its simplest terms, »

PLOTS & PLANNING CONNECTING THE SITE

a septic tank — although most self-builders and renovators will opt for a system that pre-treats the effluent, such as Klargester's BioDisc).

Manholes.....£224.06 eachRubble-filled soakaways.....£46.50 each

- Basic septic tank£600
- Approximate cost for mini-treatment plant.....£3,000

Gas

Gas isn't necessary for any part of the construction and, indeed, if the cost of supply becomes too high, it can be done away with altogether.

The supply is usually brought in along the same trenches as the other services and any gas pipework within the home has to be completed by a Gas Safe-registered contractor. The required length of gas piping is provided within the supplier's quotation.

GAS CONNECTION COSTS

 Supply from pavement on house-side of road 	
(house set back 10m)	£800
 Supply on opposite side of road 	
(house set back 50m)	£1,792
■ Meter box	£72 49

Electricity

Contrary to many people's expectations, electricity isn't needed for much of the construction process, although it's always handy. The requirements for a temporary electricity supply means the construction of a very expensive lockable unit and, as electricity is only really needed towards the later stages, it makes more sense to wait until the eventual meter boxes have been built into the walling and to use them for the temporary supply and consumer unit. If contractors do need power before the supply is available, then a generator is a solution, too.

If the run from the supply to the house is greater than 40m, then the cable has to be much thicker and is therefore more expensive. It pays to think about whether the meter box can be positioned part way down the drive in, say, the bin unit that you'll be required by the planners to provide.

MORE PLOT ADVICE ONLINE

>>> Plot Assessment Checklist **>>>** Buying at Auction

Visit homebuilding.co.uk/plots

ELECTRICITY CONNECTION COSTS

- Supply less than 40m from meter box position.....£825
- Supply greater than 40m from meter box position..£2,879
- Meter box£72.49

Telephone

A landline is considered essential by most people and, as the telephone companies supply the cable free of charge, it makes sense to lay it in the service trenches that are already being dug. These days, however, and increasingly in the future, the requirement for a landline may perhaps dwindle.

The cable, supplied free, can be routed in ducting with other services. The cost of installing a new line varies depending on the services you agree to take from the line provider (e.g. BT), but can range from free of charge up to around £150.

TELEPHONE CONNECTION COSTS

● New line connection.....£150

Service Trenches

A single 600mm service trench can be utilised by all of the above, although the gas and the electricity supplies will have to be at each extreme of the width, and the water must be at least 800mm deep. It is possible on tight sites for the sewers to run in the same trench, but on most sites they are laid separately. Service trench excavation and backfill costs are around £36/m.

How to Assess if the Plot is Viable

Almost all building plots and many near-derelict homes require some upgrade to connect to modern services. The variable nature of quotes from the utility companies means that it is impossible to give a rule of thumb as to the viability of a site based on its remoteness from the mains. Anecdotally, one visitor to the homebuilding.co.uk forum on this subject had been quoted £33,000 by their power company to connect up their barn to the electricity supply — the distance to the mains was 400m. Several other visitors confirmed that they had received similar quotes for eye-watering sums.

At those kind of prices, the option of becoming completely self-sustaining is worth considering. Large-scale solar photovoltaics, wind and other forms of micro-generation can be designed, in conjunction with sufficient storage, but the price is likely to be comparable (although, the lower long-term running costs will obviously be more beneficial).

An upfront investment of £30,000 to £50,000 is likely to have a significant impact on the viability of a project and, as a result, you should investigate likely connection costs with as much gusto as possible before committing to a plot purchase.

Most self-builders and renovators working on homes within throwing distance of the mains will be likely to receive quotes for connections in line with those quoted above — budgeting £5,000 for electricity and £5,000 for water connection is a sensible option in these instances, or less if you're closer. A good idea is to scope out what the neighbours are doing. With these kinds of figures the viability of a project is unlikely to be questioned, annoying as the expenditure is. The lesson is simple: get as much information as you can before buying the site.



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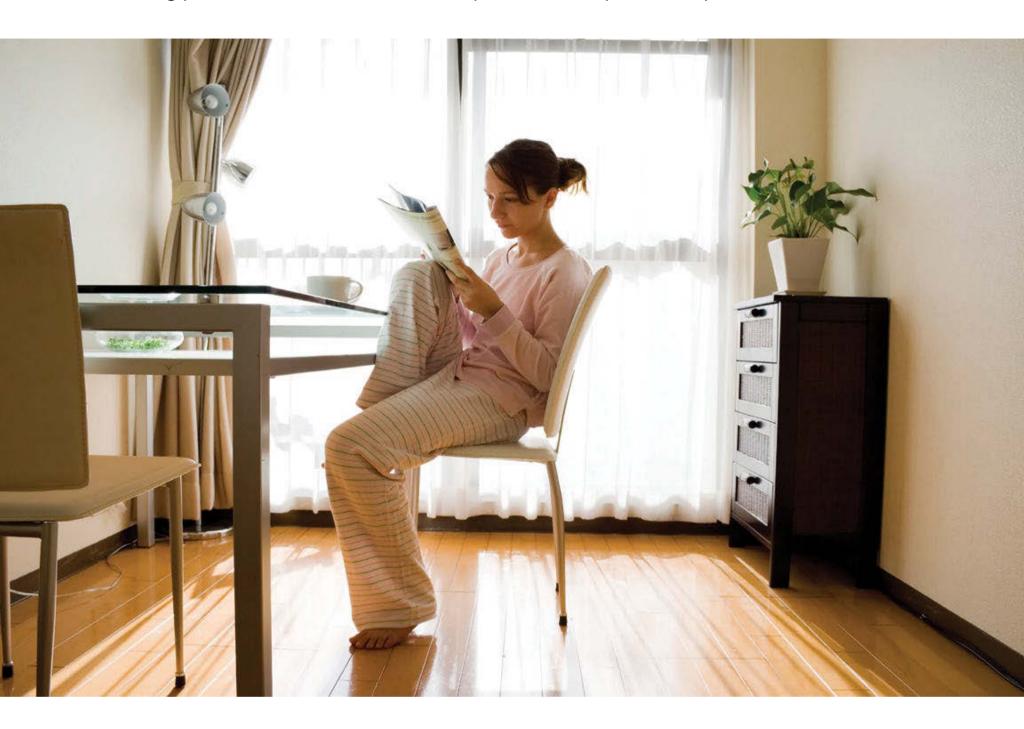




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PROJECTS

The Art of Measuring Building Materials

Ordering the wrong quantities can cost you £1,000s in wasted spend over the course of a project. Peter Eade reveals the secrets of professional measuring

THE QUICK READ

- Reducing wastage and unnecessary ordering of excess materials is a smart way to save money on extension, renovation and self-build projects
- Measuring well is the best way to achieve these savings and understanding simple quantity management is key
- >>> There are simple, basic rules for the volume of concrete required for foundation runs, the number of bricks and blocks required for a wall, etc.



his own building business, specialising in project management and design

Peter Eade has spent a lifetime running

Foundation Walls up to **Damp-Proof Course (DPC)**

The walls up to the DPC can be either cavity work in dense concrete block, engineering bricks or maybe trench blocks. The foundation walls are likely to be 1m high and working out the area is quite simple. The face brickwork will likely start a minimum of 150mm below finished ground level — this needs to be thought about if the foundation walls are in blockwork. If the below-ground walls have a cavity then lean mix concrete

will be required to fill the void up to 200mm or so below the DPC (don't forget the wall ties too). If there are drains passing through the foundation walls then these openings will require pre-stressed lintels.

uilding materials (the ones we are talking about here relate to the structural elements that are needed day-to-day on site, rather than interiors and big-ticket items such as windows) are expensive enough without over-ordering. The good news is that over-ordering can easily be avoided by accurately measuring the working drawings prior to placing any orders. All that is required is the Building Regulations-approved plan, a scale rule and a calculator. So what do you need to order? Well, the list should look something like the one on the right. Once you've got the list established, you can begin to measure.

Concrete for Foundations

Assuming that the plans show the standard 600x225mm concrete strip foundations, measuring this is quite simple. Approximately 1m³ of concrete will lay a 7m run of foundations — an approximate figure because the trench width can often vary slightly and the bottom of the trench may not always be exactly level. To arrive at the m³ quantity required, simply measure the full length of the foundation trench and divide this figure by seven.

AN ORDERING LIST

- >>> Foundation concrete
 - **™** Underground drains/lintels
- Sand, cement and mortar plasticiser **Brick/block**
 - work up to DPC
- **™**→ Oversite concrete
- **■→** DPM and insulation
- **™** Cavity walls up to plate Cavity batts, lintels,
- wall ties, cavity closers, wall connectors and cavity weep vents
- Fixings, nails and screws
 - Roof timbers
- **™** Felt, battens and nails **■→** Tiles and fittings
 - Ead flashing

Oversite Concrete Floor

Measuring the oversite floor area is simple: multiply the width by the length to get the area, and then multiply this figure by the depth for the concrete and sub-base volume. The crushed and consolidated sub-base can be MOT Type 1 or perhaps hardcore, generally about 150mm in depth. This is then blinded with sand ready to receive the damp-proof membrane (DPM). The floor insulation needs to be carefully considered too. Is it above or under the floor concrete? If it's under the concrete, order enough for the upstand around the edges. The amount of concrete required for the floor, assuming a depth of 125mm, is 1m³ to cover a floor area of 8m².

Cavity Walls

The cavity walls from DPC to the roof are also quite easy to measure, simply by multiplying the length by the height (less any openings for windows and doors). To make things easier, it is best to measure from the ground floor to the first floor joists (if it's a two storey building) and then from the joists to the roof. There are 60 »

PROJECT MANAGEMENT MEASURING MATERIAL QUANTITIES

face bricks to a square metre if stretcher bond is being used and 10 internal blocks. Once the area is known it's just a case of multiplying the total wall areas by 60 for the quantity of face bricks and 10 for the blocks. It's not a bad idea to increase the brick and block order by 10 per cent to allow for breakages.

There are ancillary items which will also need to go on the list: lintels, lintel weep vents, cavity batts (insulation), cavity closers and wall ties. The lintel specifications should be shown on the plans — if not then check the lintel manufacturer's catalogue, as this will show what size lintels are required depending on the span of each opening.

MEASURING MATERIALS: A VISUAL GUIDE Cavity trays ordered by the length Lead lashings ordered by the roll Plain roof tiles 60 per ordered by the roll m² (for other roof tiles see Timbers ordered manufacturer's to the nearest catalogue) standard length Tile batten ordered Insulation blocks Cavity batts 10 per m² ordered by m² Wall tiles Face bricks (stretcher bond) 60 bricks per m² 2.5 per m² Lintels (see plans or check manufacturer's catalogue) and weep Steel beams ordered to vents ordered as required the correct lengths (always check engineer's calcs) **Dummy window frames made** from straight sawn timber Cavity closers ordered Concrete ordered by the m³ **DPC** ordered by the roll Floor insulation ordered by 1m³ of concrete will by the roll the ma lay approximately 7 linear metres of strip foundations TWO STOREY REAR EXTENSION

The quantity of cavity batts is easy: it's the area of the cavity walls. The wall ties are usually placed in cavity brickwork 900mm horizontally and 450mm vertically, and there are approximately 2.5 ties/m^2 — an easy calculation. The cavity closers are the height of each opening plus the width. Bear in mind that there will be two sides and a bottom closer — the lintel will deal with the top.

If you're building an extension, how will the new walls connect to the existing house? This may be a proper toothed join where no additional materials are required, or more probably be stainless steel wall connectors. If it's a stainless steel connector then it's just a matter of measuring the height and then ordering to the nearest length. Don't forget the materials for the dummy window and door frames too - these are built

into each opening as the walls are built and make life a lot easier for the brick-If it's a plain roof tile layers. These dummy frames are usually made of sawn timber; it must be straight there are 60 tiles per and the frames made exactly to size. square metre

When buying sand, if the job is big enough, it's best to have a 6m3 truck load delivered. If you're buying bags by the tonne (or smaller), make sure all the sand

comes from the same supplier or the brick joints will be different colours. There are various ways to calculate how much cement will be required, but it is usually best to buy it as its needed - 10 bags should get the job started, and always stay with the same brand. The mortar plasticiser is usually bought in either five or 25 litre containers.

Roof Timbers

Timber for the roof comes pressure treated and in standard lengths of 1.80m to 6.30m at 300mm intervals (e.g. 2.10m, 2.40m, etc.) Structural timber also comes in different grades: C14, C16, C18, C22, C24, TR26, C27. The plans should show which grade is required. All timber has to be ordered to the nearest standard length. Don't forget the metal strapping for the wall plates and nails for fixing the timbers, too. For fascias, soffits and barge boards, just measure the lengths.

Roof Covering

The number of roof tiles required will vary according to the tile specified. If it's a plain roof tile then you'll need approximately 60/m². If the roof is covered with concrete interlocking tiles, check with the tile manufacturer's catalogue to find out how many are required per m², not forgetting to add 10 per cent to the tile order for breakages. The number of metres of tile batten required is dependent on what type of tile is specified - for plain tiles there is 10m run of batten per m². The roofing membrane is ordered by the roll — just work out the m² of the roof and buy enough rolls to do the job. Lead required for flashings come in rolls of various widths and codes (generally code 3 or 4 is used). If there are cavity trays required, they are available ready-made and are ordered by metre runs.

Placing the Orders

Once there is a properly quantified list of all the materials, get in quotes from builders' and timber merchants — don't just turn up with a shopping list and place the order. Quotations are best dealt with by telephone or email, and remember it's often possible to negotiate better prices on the phone. Make sure all of the prices received include VAT and delivery. Try and get at least three quotes before placing any orders. Go to builders' merchants for the items they sell and timber suppliers for the timber — the timber merchants are far more competitive. Order materials as they are needed; it's usual to place each order about a week before they are going to be used. $oldsymbol{\Theta}$

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PROJECT PLANNER SELF-BUILD STEP-BY-STEP

Self-build Project Planner

However you're getting it built, you'll need to know how a house is constructed. Here it is, week-by-week — along with a checklist of things not to forget

SIX WEEKS PRIOR

- ⇒→ Obtain quotations from service suppliers, pay them and book them
- **>>>** Organise warranty
- → Arrange site insurance
- ➡ Inform all prospective

tradespeople of your schedule

- >>> Construct lockable insulated box and fix water standpipe
- → Check lead-in times

for main orders

- → Identify plant providers
- **>>>** Identify tipping facilities
- → Advise Building Control and warranty inspectors of commencement
- ⇒ Ensure electricity and water is on site (usually arranged months in advance)



PREPARE SITE

⇒ Groundworkers create site access

≫→ Clear site

and strip vegetable soil; stacking material to be retained out of the way

- ⇒ Set up site hut and equip with drawings and safety equipment
- **>>→** Set up toilet
- ⇒ Secure lock-up/lorry container (hired in or purchased) to be positioned
- **→** Water board to bring supply to stopcock on boundary
- → Plumber to connect water standpipe
- ⇒→ Surveyor marks out building on cleared site and transfers the lines to profiles well clear of any construction work
- ⇒ Bring in bricks and blocks and stack clear of future construction
- ⇒→ Set up mixer station close to cement store and sand heap



FOUNDATIONS/ OVERSITE

- Groundworkers excavate foundations
- **■→** Wait for approval

of Building Control and warranty inspectors

→ Position any reinforcement bars, mesh or cages in the trenches

→ Position any compressible material or slip membranes required within the trenches

- ⇒ Lay ducts for services to enter through the foundations
- Arrange foot scaffold if necessary and shutter for any steps in the foundations
- → Pour concrete footings and tamp to level
- ⇒→ Obtain approval from building/ warranty inspectors to proceed
- ⇒ Bricklayers build up foundation blockwork to damp-proof course
- >> Install cranked air vents
- ➡ Install drainage exit lintels
- ⇒ Fill cavities with lean-mix concrete to level with external ground level
- ⇒ Bed and lay damp-proof courses, linking these with any Radon membranes or barriers



START SUPER-STRUCTURE

⇒ Groundworkers to dig service trenches and lay pipes and

ducts to proposed stopcock/meter positions

➤ Load out concrete floor beams to each bay and position

- → Install drainage and vent pipes, proud of the oversite
- pipes, proud of the oversite

 → Infill floor beams with blocks
- → Lay coursing blocks and position ventilator grilles
- **■→** Brush grout
- ⇒ Arrange for Building Control/ warranty inspection
- **>>** Commence building superstructure
- >> Install templates for future windows and doors, etc.
- >>> First lift of scaffolding required



SUPERSTRUCTURE

⇒ Bricklayers continue superstructure brickwork and blockwork

including work on any chimneys

- **⇒→ Install and bed lintels** including fireplace lintels
- >> Install flue liners as work proceeds
- >>> Build in meter boxes for gas and electricity
- ⇒ Electrician to install temporary consumer unit within electricity meter box
- **>>→** Service suppliers to carry out their work to the boundary
- → Plumber to reroute water supply to stopcock position
- ⇒ Electricity providers to install meter and connect
- ⇒→ Second scaffolding lift required
- Arrange crane to lift first floor beams onto each bay and position
- ➡ Position plasterboard batten clips
- Lay infill blocks



SUPER-STRUCTURE

- ⇒ Continue building superstructure to wallplate level
- ⇒ Third and then fourth lift of scaffolding required
- → Wallplate to be scarfed, bedded and tied down with proprietary wallplate straps
- >> Warranty inspection sometimes required
- Trusses as templates
- The Continue building up gable ends and chimney
- → Additional lifts of scaffolding required at the gable ends
- **→** Plumber to fit lead flashings, trays and skirts to chimney
- ⇒ Plumber to install vent pipes and flashing skirts as they come through the roof
- ➡ Bricklayers to top out and fit chimney pot
- ➡ Bricklayers to point chimney flashings



CONSTRUCT ROOF

Carpenters to sling roof trusses, and

trusses to be fixed down to wallplate

→ All binders and bracing to be fixed at node points

- **>>>** Dormers to be constructed at this point
- **▶→** Fascia and soffit to be fixed together with any necessary ventilation grilles or strips
- ■→ Warranty inspection sometimes required
- **>>>** Any roof tanks must be installed at this point



ROOF COVERING

begin to cut and lav

undercloaking to the verges

- » Roofers to felt and batten
- **>>>** Tiles/slates to be laid
- **>>>** Ridge/hip tiles to be laid and bedded
- >>> Valley tiles to be laid, or fibreglass or lead valleys to be laid
- » Plumber to dress down flashings and skirtings
- facias, soffits and barges



EXTERIOR & INTERIOR **FITTINGS**

→ Plumbers to fix guttering

>>> Window suppliers to fit external joinery

- → Plasterers to carry out any external rendering
- **■→** Scaffolding to come down
- → Plumbers to fit downpipes and connect to drainage upstands/gullies
- **External decoration**
- first fix by fitting door linings, building any studwork partitioning and fixing window boards
- **>>>** Carpenters to fix plasterboard noggins and box in vent pipes
- >>> Plumber and carpenter to liaise with building of any necessary stands in roof
- **>>>** Carpenter to fix loft trap



FIRST FIX

→ Plumbers to lay flooring membrane and insulation,

taping all joints and sealing up to the damp-proof course

- → Underfloor heating (UFH) loops to be laid and fixed
- → All first fix plumbing for hot and cold and waste within floor zones to be laid
- >> Internal gas pipework installed
- ⇒ UFH pipework to be brought to manifolds and outlet positions
- Supply and fix company to pump in and lay level floor screed and leave for three days
- → Protective hardboard/ cardboard to be laid on screed
- **■→ Electrician to fix carcass wiring** for lighting and power circuits together with all backplates
- to be positioned
- ⇒ Wiring taken to external lighting points
- → TV aerial/satellite cables to be installed to required positions
- **>>>** Internal telephone wiring to be installed to required positions
- → Home entertainment/smart systems/alarms to be carcassed



DRAINAGE/ EXTERNAL

→ Groundworkers to begin digging

the trenches for drainage runs

- Trenches backfilled to 150mm with pea shingle
- ⇒ Drains laid to required falls
- **>>>** Brick/concrete section manholes constructed, or purpose-made manholes, rodding eyes and gullies set in runs
- → Building inspector to approve laid drains
- **■→** Drains haunched over with pea shingle
- → Drainage trenches backfilled
- **>>>** Work to connect to main sewer in road to be carried out by approved contractors
- Carpenter to finish boxings and noggins ready for plasterer
- Groundworkers to commence driveways and pathways
- ➡ Bricklayer to build any fireplaces and hearths
- **■→** Gas meter to be installed and connected
- → Plumbers and electricians to liaise on all cross bonding and earthing



CEILINGS/ DRY LINING

to be fitted by the carpenter

and protectively covered

- Dryliners/plasterers tack ceilings
- → All external and blockwork walls lined with plasterboard on dots and dabs
- → All studwork walls and pipe boxings tacked with plasterboard
- » All joints and angles filled and scrim taped
- **>>>** All abutments of differential materials jointed with mesh
- → All joinery to be sealed internally and externally with mastic
- **>>>** Dryliners/plasterers to skim coat all walls and ceilings
- → Decorator to paint/treat backs of all skirting and architraves
- **>>>** All roofing insulation to be installed



SECOND FIX CARPENTRY

- internal doors
- **■→ Skirting and**

architrave to be fitted by carpenters

- Bottom tread of staircase to be fitted. balustrading and handrails to be fitted, as well as linen cupboard shelving
- >>> Final fit of loft trap door and ladder
- Timber floors to be laid by carpenters or specialists and protected
- Ceramic floor tiles to be laid by specialist tilers and protected
- >> Carpenters/specialist suppliers to fit/build built-in bedroom and bathroom furniture
- Kitchen units to be fitted



SECOND FIX

- → All wiring connected
- to consumer unit
- **≫→** Boiler to be positioned,

plumbed and then wired in

- ⇒ Sink units to be plumbed in, earthed and cross bonded
- >> All sanitaryware to be fitted and plumbed in
- → Radiators and towel rails to be fitted and plumbed in
- → Underfloor heating loops to be connected to manifolds
- Electrician to check cross bonding and earthing to all sanitaryware, sinks, radiators, etc.
- ⇒ Boiler to be wired in; control systems and room thermostats to be wired in
- → Plumber and electrician to attend firing up and commissioning of boiler
- → All pipework and connections to be flushed through and pressure tested
- Central heating to be left on 'test'

>>>

PROJECT PLANNER SELF-BUILD STEP-BY-STEP

21-23

DECORATING

➤ Worktops, made from the previously taken templates, to be fitted

→ House to be thoroughly cleaned with all debris and dust removed to outside

- ⇒ Decorators to snag any holes, blemishes or rough patches on walls, making good
- ⇒ Internal timber to be sanded smooth or rubbed down with wire wool
- ⇒ Decorators to paint all walls and ceilings, mist plus two coats of emulsion
- ⇒ Internal timber to be knotted, painted, primed, undercoated and top coat glazed, or internal timber to be two-coat stained
- ⇒ Specialist tilers to fix ceramic wall tiles to kitchen and utility rooms
- ⇒ Baths to be filled, in order to settle, before tilers fix any wall/splashback tiles
- >>> Water meter to be installed

23-4

LANDSCAPING

⇒ Groundworkers or landscape gardeners to level the

ground and prepare

Topsoil from storage to be placed where required, with extra shipped if necessary

- ⇒→ Site hut to be removed or re-sited if intended for use as a garden shed
- **⇒** Secure site storage to be sold off or returned to hirers
- → Groundworkers to complete driveway surface
- → Patio slabs to be laid
- ⇒ Bricklayers to build any required dwarf/decorative walling
- ⇒ Lawned areas to be levelled ready for seeding or turfed
- Approved contractors to complete any bellmouth and kerbing to road
- **>>>** Telephone company to connect
- → Contractors to install TV aerials and/or satellite dishes
- → All trades return for any snags



COMPLETION

- >> Whole house to be thoroughly cleaned out
- **■→ All windows**

polished and all labels removed from glass and appliances

- → All polystyrene packing to be removed from cookers
- All stabilising bolts to be removed from washing machines/driers
- ⇒→ Site toilet and any remaining plant on hire to be off-hired
- » Readings to be taken on all meters
- >>> Central heating switched to 'run'
- ⇒ Local authority to be advised of completion to arrange for Council Tax valuation
- ⇒ Energy Performance Certificate to be prepared and sent to Building Control
- **>>>** Building Control final inspection and issuing of completion certificate
- >>> Warranty inspectors final inspection and issuing of warranty
- Arrange protective covering for floor surfaces prior to delivery of furniture
- ⇒→ Switch self-build site insurance policy to homeowners' policy **①**

A Self-builder's Checklist

Things to make sure you do — before and after you start

- Ensure that planning permission has been obtained prior to commencement of works
- Do not arrange to start work until all conditions within the consent have been discharged
- ⇒ Do not start work until/ unless a Building Regulations application has been lodged
- ⇒→ Send off for quotations for services and utilities as soon as possible
- When you get the quotations, accept them and agree a timescale for their work
- If you can't get mains water in time, arrange a hosepipe with a neighbour or hire a bowser
- Organise hire of any plant, lock-ups and toilets
- Create accounts with local builders' merchants and readymixed concrete suppliers
- Check lead-in times for materials and add them to your project planning
- Theck availability of chosen trades/builders and plan your project accordingly

- Arrange self-build site insurance
- Arrange warranty providers
- Send in notice of commencement of work to Building Control and warranty providers
- Ascertain where and how spoil will be disposed of
- Identify plant hire outlets, including concrete pumps
- ▶ Be aware that reinforcement may be required in the foundations. Mesh and bar are easily obtainable but madeup cages will have a lead-in time
- Plan where materials will be stored on site
- >>> Set up the mixer station in a position where it can be replenished with sand and cement
- Order the floor beams well in advance
- Arrange the scaffolders in good time
- Start to choose second fix items and kitchens etc. by at least week 11
- Finalise electrical outlet positions etc. by at least week 13
- Identify and commission an approved contractor for any

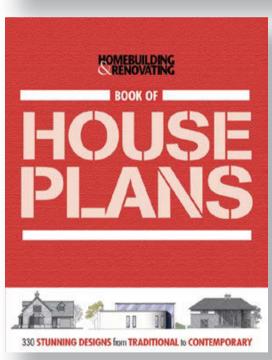
work within the Highway

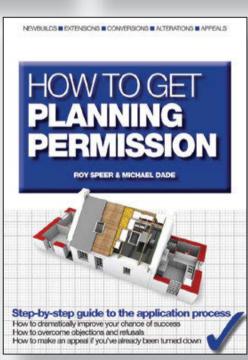
- >>> Don't forget that board or trestle scaffolding will be needed internally by the plasterers
- Run central heating on a low 'test' setting when installed
- ⇒→ Don't let the painters and decorators start or continue work in a dirty house — clean it thoroughly beforehand
- Badger all trades to get back before completion to snag their work and hold final payment until they do
- Off-hire plant and toilets as soon as practicable
- Mark Your last tranche of mortgage money will depend on the provision of an Energy Performance Certificate, a completion certificate from Building Control and a warranty certificate from the providers
- Take meter readings before moving in and switch central heating to 'run' when moving in
- ➡ Inform your local authority when you move in and arrange for a Council Tax valuation

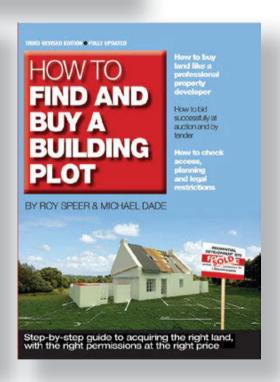
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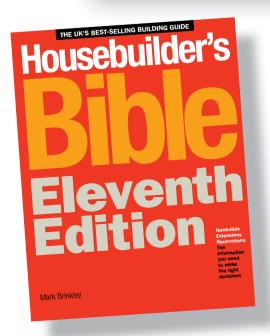










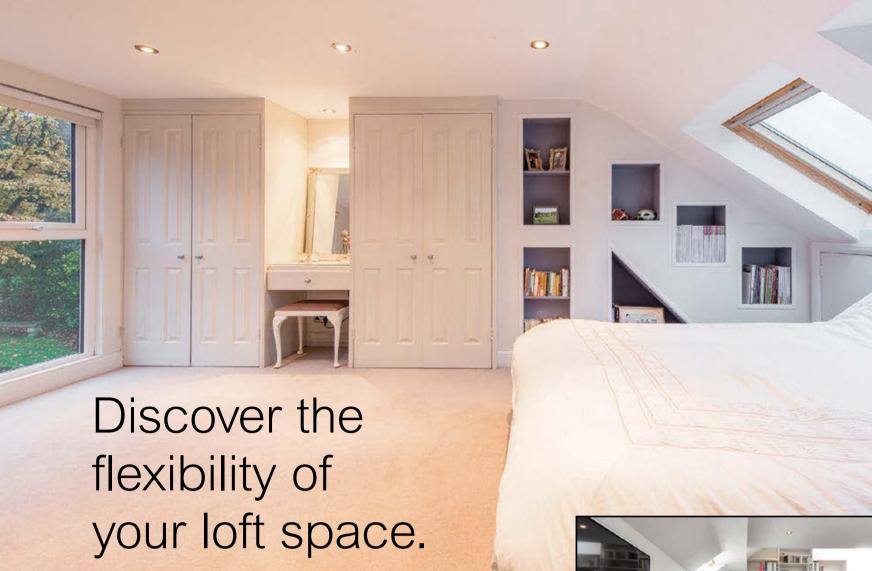


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Planning permission rules relaxed from 1st October 2008





Toolkit: Loft Conversions



This section: An in-depth design and building project guide. Edited by Claire Lloyd

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LOFT CONVERSIONS



Beginner's Guide to Converting a Loft

Utilising all the space a house has to offer is a great way of gaining additional accommodation, but not all lofts are ripe for conversion

dding a room or rooms within the roof space is one enviable and often cost-effective way of gaining additional accommodation, be it for a master bedroom suite, a home office, a living area, a playroom or even a home cinema. While sloping roofs can present a challenge when it comes to storage and furniture arrangement, they also add architectural interest to new rooms. What's more, converting the loft is a particularly good idea

for homes with small gardens, where extending would swallow up invaluable green space, or for those regions – London and the South East – where floorspace is at a premium.

However, it's important to note from the outset that not all lofts are ripe for conversion, and in some instances, costly alterations may exceed the value added to the property. So, if you're planning to sell up in the near future, it's worth approaching an estate agent for a projected valuation and working out the sums from the get-go.

That said, innovations from companies

such as Moduloft (who provide a complete 'remove and rebuild'solution, which sees the old roof replaced with a factory-engineered loft space) and TeleBeam (who provide a lightweight aluminium telescopic beam which provides a solution for those problematic post-1960s fink roof trusses, among other things) mean that many 'problems' associated with difficult loft conversions are now surmountable.

So what factors impact on the complexity of a loft conversion? Height, roof pitch and the type of roof structure all have an











obvious bearing on the potential for conversion. Other factors which can impact on the cost-effectiveness of a conversion include the strength of existing foundations; the shallow foundations of some old properties may not be sufficient to support the additional load. The presence of water tanks or chimney stacks may need to be given some thought, but do not tend to be dealbreakers.

While there are no set rules on headroom for loft conversions – other than above the staircase (see pg. 147) – 2m at the apex really is a minimum practical height. It's worth remembering during initial appraisals that once the floor has been strengthened, insulated and flooring added, and the roof insulated, 300mm or so will be lost from the room height.

Dormer windows and other such additions are sufficient means of adding head height in some lofts. However, for shallow pitched roofs and/or those seriously lacking in height, then lowering the floor below or replacing the whole roof space entirely – the Moduloft solution discussed earlier – subject to planning permission, could be the only feasible solutions. Again, it all comes back to a question of cost-effectiveness.

Deciding Who to Work With

There are several different routes to achieving a loft conversion. You could choose a design and build contractor — and there are a growing number dedicated solely to loft conversions. "They offer a convenient route as their in-house design team will have tried and tested solutions, and engineering details for most standard house types, so they will be able to achieve what you want quickly and cost-effectively. They will also have an experienced team of builders," says HB&R's content director, Michael Holmes.

If you hope to be fairly hands-off, then this is a good route to take. There also tends to be the added benefit of a fixed price, which can include design fees. What's more, they typically deal with planning permission, if required, and Building Regulations approval. "If you use a respectable loft conversion company you can be assured that the team will provide the right advice and information as part of the package quoted," adds Rebecca Tibbert, director of Econoloft.

"If you want a unique design however, it's best to talk to an architectural designer," says Michael. "You are likely to incur greater professional fees and will also need a struc-

Different Uses for Loft Spaces

1: This conversion provides a new kitchen, dining and living area, and was undertaken by Econoloft. The loft conversion element cost £35,000; 2: This conversion by Absolute Lofts features full-height glazing, maximising light and views; 3: This stunning kitchen, hand-crafted by Barnes of Ashburton, sits beneath an interesting vaulted ceiling within a loft conversion. (A similar kitchen costs from £30,000); 4: Converting the loft of an old home can be an opportunity to reveal features; 5: Bathrooms under sloping roofs require careful planning; this bath makes excellent use of the eaves space in this project by Absolute Lofts

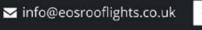
tural engineer. Fees for designing a typical £30,000 to £40,000 loft conversion would be in the region of £1,200 to £2,400 for planning drawings and at least the same again for construction drawings. But the benefit is that you will have a licence to use the design and so can put the project out to tender to find the best build price." This route could also provide opportunity to project manage and get involved on a DIY basis if you so wish.



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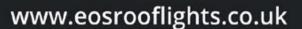


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LOFT CONVERSIONS A BEGINNER'S GUIDE

An architectural designer is often the best solution when taking on a whole-house project and perhaps looking to extend too — they'll be able to develop a cohesive design scheme across the entire house.

Different Types of Loft Conversion

What you want to use your loft for, your budget and, most of all, the type of roof you have will all determine the most suitable conversion type for your home. HB&R's Michael Holmes takes up the story: "Rooflight conversions are the most cost-effective option as they involve converting just the existing loft space, very little alteration to the roof space apart from the addition of windows set into the slope of the roof, insulation and strengthening of the floor.

"Dormer conversions are the most common type of loft conversion. Dormer windows are added to increase the volume of the roof space while providing full headroom. Dormer windows are usually added to the rear, but can be added to the side or front subject to planning permission.

"Gable-to-gable conversions are a variant of the dormer roof conversion, where the dormer window stretches the full width of the house, from gable end to gable end — they tend to look more sympathetic than a very large box dormer. Sometimes this involves building up the gable end walls to 'bookend' the new space at either side.

"Hip-to-gable conversions involve one or more of the hips (where the roof slopes in from the side(s) as well as front and back) being replaced with a gable wall. The roof is then extended over these gables to add extra space with full headroom.

"Finally mansard conversions involve one or both slopes of the roof being replaced with a new structure with very steep sloping sides (almost as steep as the walls) with an almost flat roof over the top. This design is used where the original roof had little or no headroom, and creates sufficient volume for an additional storey. Mansard conversions normally need planning permission."

Costs

For a 'simple' loft conversion whereby rooflights are introduced, budget in the region of £1,200 to £1,500/m². A dormer conversion will cost approximately £1,440 to £1,680/m², while more complex conversions involving a hip-to-gable or mansard conversion will cost around £1,680 to £2,400/m². \bullet





Clever Storage Solutions

1: Fitted furniture really is the only way to maximise storage potential in loft rooms. This solution, the Milan, was designed and fitted by Sharps;

2: Built-in display units are a clever idea, as this master bedroom loft conversion by Econoloft goes to show; 3 & 4:

These clever solutions by Barbara Genda Bespoke Furniture make the most of the eaves space







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LOFT CONVERSIONS

Loft Conversions: The Rules & Regs

Planning permission may not be required for a loft conversion, but Building Regulations approval certainly is

DO I NEED PLANNING PERMISSION FOR THE WORK?

Loft conversions can fall within Permitted Development (PD) – subject to meeting certain criteria - meaning that you may not need to apply for planning permission to undertake a loft conversion. Under PD, the roof space can be converted up to a volume of 50m3 if the property is semi-detached or detached. If the property is terraced, a conversion of up to 40m^3 can be created. If you're intending to add a dormer or the like, this can't be added to a roof slope on the principal elevation that fronts the road, nor can it be higher than the highest part of the roof — otherwise you'll need planning permission. The materials used to clad such additions must be similar in appearance to those of the existing house to fall under PD.

There are also rules regarding the glazing. For example, rooflights must not project 150mm beyond the roof plane. If side-facing windows are to be introduced, they must be obscure glass, and to be opening windows – as opposed to fixed – they must be positioned 1.7m above the floor level to be considered under PD. Verandas, balconies or raised platforms all require planning, however. A full list of criteria can be found at planningportal.gov.uk.

It's also worth noting that not all houses have PD rights (they may have been restricted or taken away by the local authority when the property was built or previously extended, or where an Article 4 Direction has been applied — the latter being particularly common in Conservation Areas). Listed buildings will be subject to listed building consent, too. If in doubt, contact your local planning department, and if you're in the process of purchasing a property where you hope to convert the loft, do ask your solicitor

whether there is anything within the deeds which will prevent this. Conversely, if you hope to sell the house in the near future, you may want to consider applying for a Lawful Development Certificate from the local planning authority for peace of mind; it'll cost £86 (in England).

If you live in a terraced or semi-detached home, then a loft conversion will typically involve work to a shared wall. As such, you'll need to give the affected neighbours Notice under the Party Wall Act at least two months prior to work being undertaken.

AND WHAT ABOUT BUILDING REGULATIONS?

Regardless of whether planning permission is required, loft conversions constitute a 'material change of use' and therefore fall under Building Regulations. Your designer or loft conversion company can prepare plans for Building Regulations purposes.

The Regs do cover safety, with aspects of the project such as the structural strength of the floor, minimum headroom above the staircase and escape from fire covered. But they also include thermal efficiency (see overleaf for more), and the electrics, plumbing and glazing are covered too — but the latter can normally be self-certified by approved installers and/or trades.

One particular area of note is the staircase. "Fortunately, when it comes to loft stairs, Part K of the Building Regulations adopts a pragmatic approach," says chartered surveyor Ian Rock. "Instead of the normal requirement for headroom of 2m above each stair tread, it is recognised that ceilings to loft stairs may need to slope. So a reduced space of 1.9m above the centre and 1.8m on the lower side can be acceptable as long as you can achieve 2m on the higher side.

"Where the new accommodation comprises a single habitable room, Building Control may accept less conventional solutions such as alternating tread 'paddle' stairs."

Fire safety is another area covered. In bungalows there's a requirement for fire escape windows to be fitted in all habitable loft rooms. If the house has two or more storeys however, then the Regs are likely to have some impact on the rest of the house too. In basic terms, you'll need to create a protected escape route, and this will typically be via an enclosed staircase which leads directly to an exterior door.

In practice, if a staircase sits within the hall/landing, then an 'enclosure' can be created by introducing fire doors to rooms leading off this. "Always make sure your fire doors and fire doorsets are accredited by the British Woodworking Federation BWF-CERTIFIRE scheme, though," advises Chris Miller, doors product manager at JELD-WEN, who offer a 35mm-thick fire door, FireGuard. Unlike 'standard' 44mm-thick fire doors, the latter can be fitted within 35mm frames, meaning existing door openings may not need to be altered.

Surrounding walls must provide 30-minute fire resistance in this instance. Masonry walls tend to meet this, but stud walls may need upgrading. Smoke alarms which are both mains and battery powered must be added too. There could also be further requirements for upgrading floors to provide fire resistance under the Regs.

The situation becomes more complex where the staircase terminates in an open plan ground floor space. Options can include enclosing the staircase as before, or fitting a sprinkler system, with a fire door separating the ground floor from the upper floors and a clear route to a first floor escape window. •



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LOFT CONVERSIONS

How to Insulate a Loft Conversion

Ventilation and maximising headroom are the key factors to consider when it comes to ensuring your new loft space is well insulated, says Tony Millichap



TONY MILLICHAP Tony is Head of Technical at Kingspan Insulation and is one of the UK's leading experts on insulation

t's all very well creating the space for a room in the roof, but it will only ever get used if it is insulated to a high standard. The problem is that different insulation choices have variable impacts on not just comfort levels but also how much headroom you'll be left with. As with most building work, there is a minimum requirement under Building Regulations, but most loft converters would want to beat that.

What are the Requirements?

The thermal performance requirements for loft conversions are contained in the country-specific Building Regulations across the UK. While the target U values and the guidance for achieving them differ between each country, in almost all circumstances a roof U value of 0.15 will allow compliance.

Which Approach Should you Take?

If you intend to replace the entire roof of your property then an unventilated approach, ideally with insulation fitted between and above the rafters, is the best solution. Full details of this approach can be found at homebuilding.co.uk/insulation. If, on the other hand, the existing roof is retained, then the best approach is to install insulation between the rafters with a further layer of insulation below to minimise thermal bridging through the rafters. In most existing properties, a non-breathable sarking material such as felt will have been installed be-

Right: Insulated Plasterboard

In order to ensure roof insulation levels of the required U value of 0.15, it's best to fit insulation between the rafters and finish with insulation such as an insulated plasterboard – below

THE QUICK READ

- >> Insulating the loft to a high standard can reduce heating bills and improve your home's value
- >>> Most older properties will require ventilated roofs and in turn require a 50mm air gap between the sarking and insulation to prevent condensation build-up
- >>> The key differentials between insulation types are in thickness, resulting in variances in headroom and therefore usable space

low the roof tiles. But while this layer helps to keep rainwater and the elements out, it can also lead to condensation buildup between the sarking and insulation if the space is not effectively ventilated. To maintain airflow from the eaves, a gap of at least 50mm is therefore required between the insulation layer and the sarking material.

It's possible to meet the 0.15 requirement with many different sorts of insulation, including traditional mineral fibre, but in order to maximise headroom, rigid phenolic insulation is usually preferable. The boards are lightweight, making them easy to install and by selecting a phenolic insulated plasterboard product with an integral vapour barrier, it is possible to further reduce fitting times.



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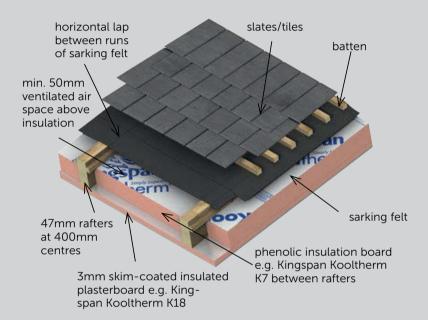
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Rafter Level

A proprietary eaves ventilator should be installed at the top of the eaves to maintain airflow. A layer of flexible insulation should then be tightly packed below to minimise thermal bridging and air infiltration.



Assuming 125mm-deep rafters at 600mm centres, a 75mm thickness of phenolic insulation should be fitted between the rafters. To maintain the 50mm air gap and to ensure the insulation layer is flush with the bottom of the rafters, timber stop battens should be nailed into the rafters at the appropriate depth (in this case 75mm from the rafter bottom). If necessary, rafter depth can be increased by running timber battens along the underside of existing rafters.

As the distance between individual rafters can vary, it is important to carefully measure up before cutting each board to ensure a snug fit. Any remaining gaps can then be filled with either an expanding insulated foam or a flexible sealant.

82.5mm phenolic insulation plasterboard is then fitted below with the long edge running horizontally below the rafters. The joints should coincide with noggins or joints, lapping by at least 19mm on either side. Drywall screws, penetrating at least

47mm wide joists

3mm skim-coated insulated plaster-board e.g. Kingspan Kooltherm K18

Above: Insulation build-up for a typical loft floor

25mm into the rafters or noggins, are used to fix the insulation in place at a maximum of 225mm centres. The screws should be no less than 10mm from the edge of the board at bound edges (paper bound) or 13mm from non-bound or cut edges. A flexible sealant should then be applied to the joint between the roof and floor.

For ease of installation and practical reasons this same insulation build-up can also be used where there is a horizontal ceiling or a collar tie.



Above: Insulation build-up for a typical dwarf wall

Dwarf Walls

If you choose to install dwarf walls, then the roof between the wall and eaves (i.e. the horizontal joists between the eaves and the dwarf wall) should be insulated.

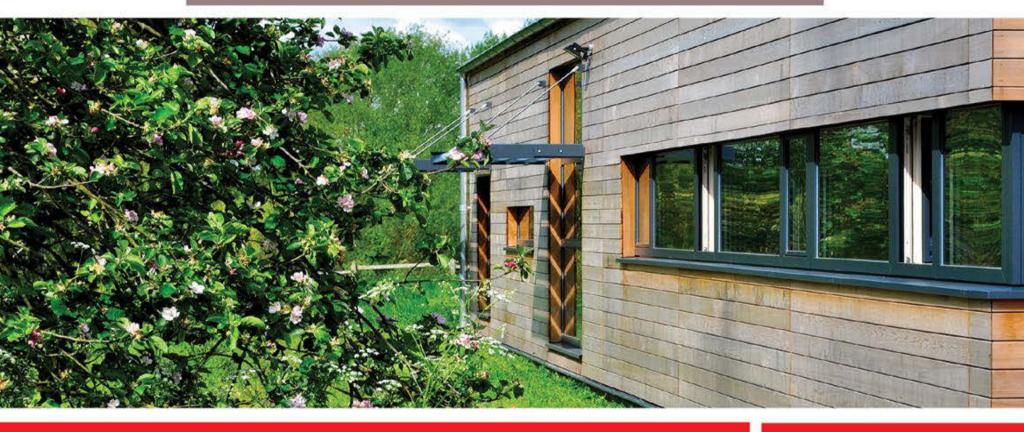
Assuming 100mm joists at 600mm centres, the joists should be filled with a 75mm layer of phenolic insulation. Flexible insulation should again be used to reduce thermal bridging and air infiltration at the eaves, with care taken to maintain an air gap. A further 75mm layer of phenolic insulation can then be fitted horizontally across the top of the joists.

A U value of 0.22kW/m² should be targeted to ensure the dwarf wall complies with the Building Regulations. Assuming studs at 600mm centres, 75mm phenolic insulation should be installed between the studs. A 'stop' should also be fixed to the outer surface of the stud to ensure the insulation boards remain flush with the inner surface of the timber studs. A 42.5mm thickness of phenolic insulated plasterboard should then be fitted over the inner face of the studs with drywall screws. •

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LOFT CONVERSIONS

5 Ways to Loft Conversion Success

There are a couple of factors to consider when taking on a loft conversion project

1 If you are adding a bathroom or an en suite, you'll need to think about the location of existing services. Adding hot and cold water supplies can be straightforward, with the supply branched off the existing plumbing system either at the boiler or from the floor below. Flexible plastic plumbing is relatively easy to thread through the joists. However, it can be a cost-effective idea to position a new bathroom above an existing bathroom on the floor below in order to connect to existing soil pipes. If it's not possible to connect to existing soil pipes, then a macerator (try Saniflo or Screwfix) tends to be a cheaper alternative to introducing a new soil pipe.

On this note, it's important to investigate whether the existing boiler can cope with the additional demand for heating and hot water — particularly if you plan on including a new bathroom or en suite. (Although the inclusion of an electric shower, which heats up water without relying on a boiler or hot water storage cylinder, could help reduce this demand.)

The type of heating and hot water system within your home will also have a bearing. Those with gravity-fed systems will have a cold water tank positioned as high as possible in the house — typically in the loft you hope to convert. Thought will need to be given to where it could be repositioned.

Gravity-fed systems bring a further predicament in this instance. "The challenge with this type of installation is that if the cold water tank is located below or level with the shower, this creates what is known as a negative head situation which affects the pressure of the water supplied to the shower," says Steve Saunders, senior technical manager at Triton. "The best option for a gravity-fed water system can often prove

to be a shower designed to work specifically under low pressure. For those homeowners who would prefer a mixer shower, Triton's Satellite Low Pressure thermostatic mixer is ideal. This unit incorporates two pumps and will ensure a high showering performance even within a gravity-fed system where the water flow is restricted. It's important to check that this mixer unit can be located below the cold water tank however, to allow the gravity-fed system to work correctly.

"Alternatively, it is possible to have a mains-fed electric shower in a loft conversion. This would require at least 1 to 1.5 bar running pressure at 8 to 11 litres per minute, depending on the shower's kilowatt rating. In the majority of cases, a mains-fed electric shower can prove to be the most appropriate for a loft conversion."

Alternatively, if you're making considerable changes to the existing gravity-fed heating and hot water system, you may even consider replacing it with a mains pressure system (providing you have at least 1 bar of water pressure in the local mains supply), or with a combi boiler (if you only have one or two bathrooms).

Don't treat the staircase as an after-thought. "So many people treat a staircase simply as furniture when it's really part of the architecture — a great staircase can make your extra room flow and become a harmonious part of the whole," says Richard McLane, design director of Bisca. "As well as creating a loft design that's sensitive to the era of the building, it's crucial to consider carefully the space you're gaining above and the space you're losing below in order to gain access. Placing the staircase in a spot that won't waste 'good' space is crucial, but so is choosing a sympathetic staircase design."

A Soundproofing between floors, or walls to a neighbouring property can be an issue when converting a loft, but there are ways to mitigate this. "One of the best materials for sound insulation is mineral wool (in quilt or batt form), which can be stuffed between floor joists or studwork," says chartered surveyor and HB&R expert Ian Rock. "Lining walls and ceilings with a double layer of acoustic plasterboard can also be very effective, as can laying a carpet over thick rubber underlay. For the best results, consider laying acoustic floorboards to the loft room and constructing a suspended ceiling to the rooms below, packed with mineral wool."

Ventilation is essential to minimising the risk of condensation when adding insulation between and below rafters. "In all of our loft conversions we add a 50mm air gap between the existing roof and the insulation that we install and also between any new dormer stud walls and the roof. This gap allows air to flow between the two surfaces reducing the chance of condensation," says Rob Wood, director of Simply Loft. •



O LICHOIN GIVES IN STORY

LOFT CONVERSIONS CASE STUDY



PROJECT NOTES

Architect

POW Architects (pow-architects. com; 020 3176 6620)

Main Contractor

Plenta Effect (plentaeffect. co.uk)

Location

London

Build Time

Apr - Aug 2013

Build Cost

£120,000

Breaking the Mould

A Victorian terrace is transformed by a 21st-century loft 'extension'

n the pursuit of turning a loft space into additional accommodation, the exterior of a home can often go overlooked, with oversized dormers or box-like additions bolted-on. However, setting the trend for projects which boast architectural beauty both inside and out is the home of architect Gareth Pywell.

"I was already 'cutting up' the building before we completed on the sale," Gareth says of the Victorian semi-detached house which he and his wife Lucy purchased in 2004. The London property, which sits above a ground floor flat, consisted of two floors — the first providing a living room, kitchen, bathroom and bedroom, with the

second providing a small second bedroom. However, in juggling renovation work – "The house hadn't been touched in around 15 years," Gareth says – and setting up POW Architects, it would be almost eight years before Gareth would have the luxury of time to begin the task of adding further space and creating this striking, sculptural roofline.

This project departs from the 'standard' loft conversion in two ways: to begin, it's perhaps more comfortably described as a loft extension project. What's more, the additional space created has not simply been put to good use in creating further floorspace, but vertically in adding height to rooms. In the living room to the front of

Above: An Extended Roof

This award-winning project went to committee stage but was successfully awarded planning permission, and has since been highly commended for its innovative take on the loft conversion. The new zinc-clad roofline, which 'bookends' this Victorian semi-detached home, has provided scope to include a new guest bedroom-cum-cinema room within the new loft space created, as well as helping to raise the ceilings of an existing second floor bedroom (at the rear of the property) and the living room (at the front)



LOFT CONVERSIONS CASE STUDY





the house, the raised roof has provided an impressive half-vaulted ceiling. "The roof of the rear return has also been reversed. What once provided a compromised eaves headroom of 1.6m in the rear bedroom, now provides enhanced height and space up to 3m with a minimum headroom of 2.2m," explains Gareth. In this London home, the enhanced ceiling height works wonders in creating an illusion of space.

Adjacent to the living space and on the newly created third floor is a new cinemacum-guest bedroom with en suite. Here, an acoustic double-glazed screen (BELOW LEFT) has been specified between the two spaces. It serves a dual purpose: it lends light to the new room, but also provides soundproofing when the room acts as a home cinema (a black-out blind and projector screen come down at a flick of a button, might I add), or when the room is used as a guest bedroom.

However, of all the changes, the most striking externally is the zinc rainscreen. It references the neighbouring slate-clad loft conversions and is a nod to the roof of the adjacent converted chapel, but is a contemporary departure from both. "I didn't want to follow the traditional vernacular," Gareth says. "By employing varied length, width and colour sheets of this versatile and modern building material, there is an impression created that this contemporary roof-top box is 'dripping', 'running' and 'morphing' down into the existing Victorian structure which sits beneath it." While the build was undertaken by the contractor Plenta Effect, the specialist zinc work was subcontracted out to BellZinc.

With the roof being removed from much of the property, the Pywell family moved into a neighbouring flat for the duration of the four-month build, which provided a comfortable spot from which to keep a close eye on proceedings.

The result of the £120,000 project – which has added more than double again to the property value – is a comfortable home which feels spacious and filled with light, with room for a growing family.

Left: The Cinema Room

The double-glazed partition allows this cinema room-cum-guest bedroom to borrow light from the living space, but also acts as a soundproof barrier. Carpet, soft furnishings and padded wall art aid with the acoustics in this impressive room

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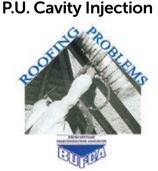
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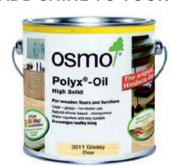
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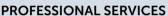
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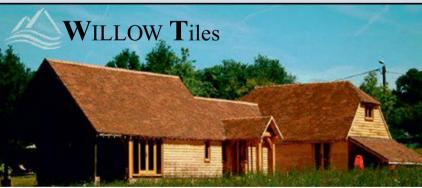
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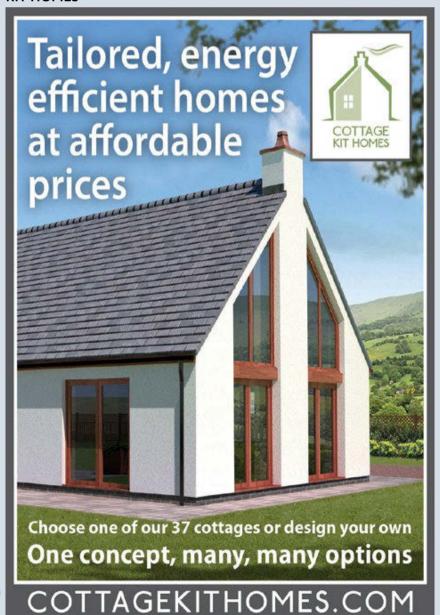
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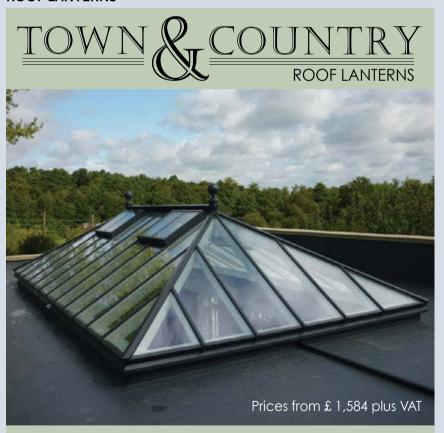
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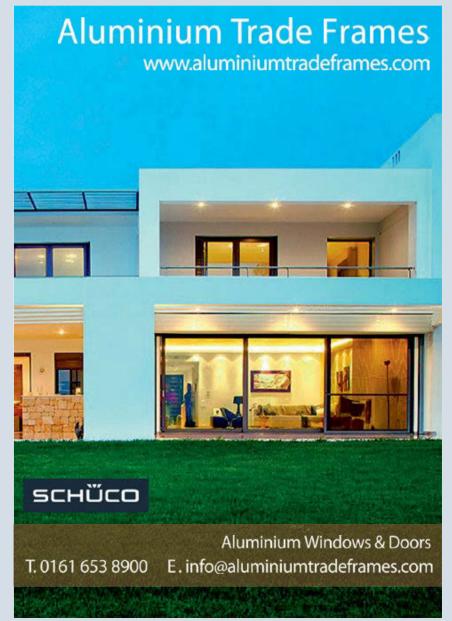
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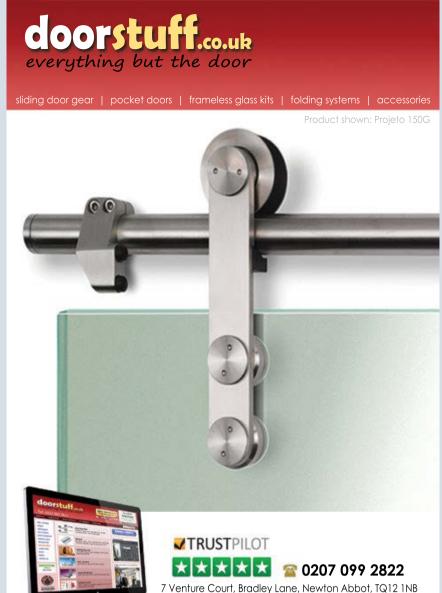
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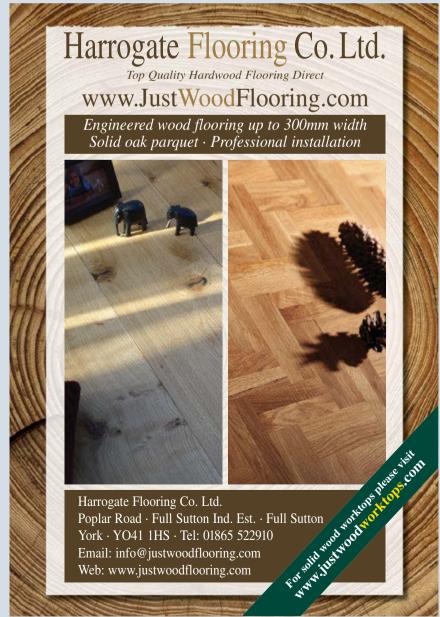
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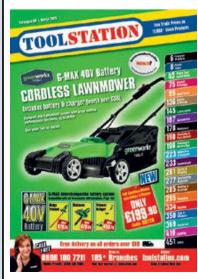
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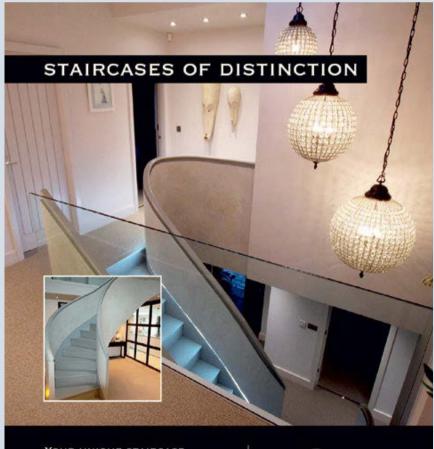




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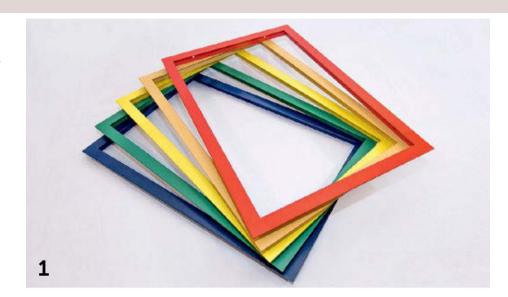
For 2015, UK shower enclosure manufacturer Aqata has introduced three new bath screens to the Spectra frameless range, including the Spectra SP493 Triple Panel Folding Bath Screen (shown). Providing a multitude of space saving design solutions for over bath showering, the new screens feature the award winning ClearShield ECO-GLASSTM as standard. www.aqata.co.uk

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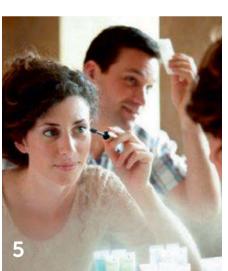
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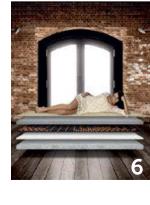
















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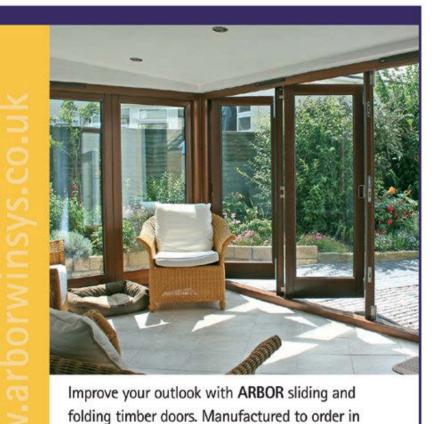


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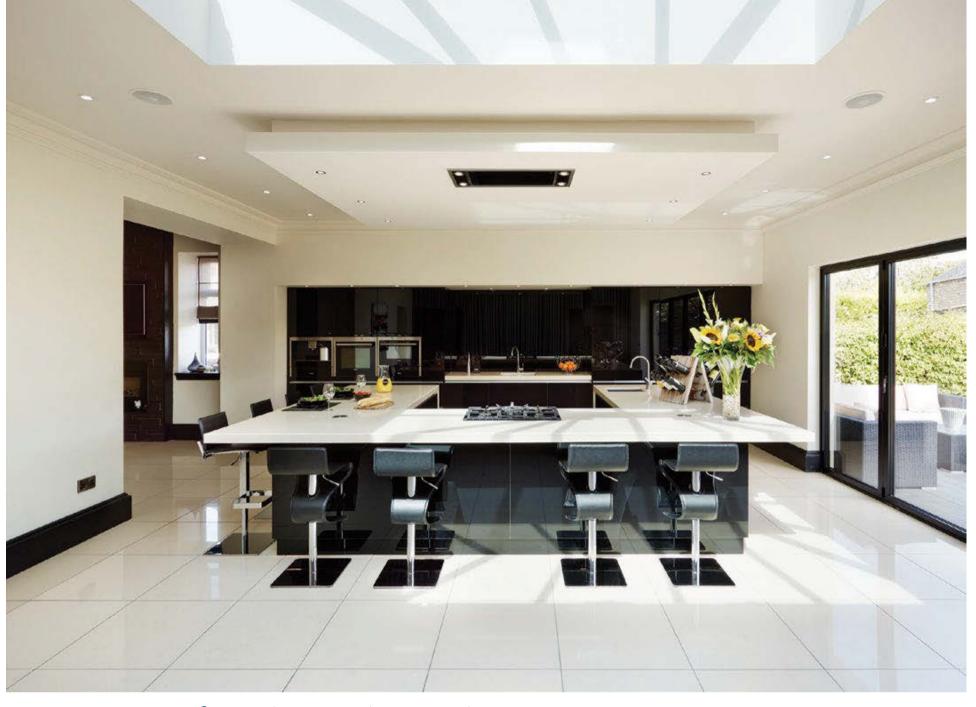
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SOURCE LIST

UPFRONT (P.13)

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J. Rotherham	01430 861047
IQ Glass	01494 722880
SieMatic	0161 246 6010
Panasonic	panasonic.com/uk
PanasonicJim Lawrence	•
	01473 826685

UTILITY ROOMS (P.39)

Ikea	ikea.com
Howdens Joinery	howdens.com
Barnes of Ashburton	01364 653613
John Lewis	johnlewis.com
Scotts of Stow	0844 482 2800
Keter	keter.com

CONTEMPORARY-STYLE WINDOWS (P.70)

IQ Glass	01494 722880
Velfac	01223 897100
ecoHaus Internorm	01483 324050
Raynaers at Home	0121 421 1999
Lomax+Wood	01277 353857
Kloeber	01487 740044
Livingwood	01359 272646
Origin Global	
Olsen UK	01777 874510
AluK	01633 810440
Anglian	0800 954 1203
Jack Brunsdon & Son	0845 490 1964
Bereco	01709 377406
Westbury Joinery	01245 326510
Rationel	01869 248181
EcoHome Windows	01273 906640
HWL Windows Group.h	nwlwindows.co.uk

SHOWER ENCLOSURES (P.80)

Aqata	01455 896500
Duravit	0845 500 7787
Merlyn Showering	
me	erlynshowering.com
Novellini	novellini.co.uk
Matki	01454 322888
NYMAS	01642 710719
Frontline Bathrooms	
frontl	inebathrooms.co.uk
Better Bathrooms	0844 484 7678
Victoria Plumb	victoriaplumb.com
Mira Showers	0844 571 5000

C.P. Hart	0845 873 1121
Manhattan Showers	01282 605000
Roman Showers	01325 311318
Bristan	0330 026 6273
KUDOS	01539 564040
KOHLER	kohler.co.uk
Aqualux	aqualux.co.uk
Aquadart	. aquadart.co.uk
Majestic Showers	.0844 800 1500
Wickes	0330 123 4123
B&Q	diy.com
Simpsons simpsons-e	enclosures.co.uk

INSULATED CONCRETE FORMWORK (P.118)

Nudura	0800 014 8901
Logix UK	0845 607 6958
Beco Wallform	01652 653844
Quad-Lock	quadlock.com
PolySteel	01242 692335
Polarwall	0845 838 2181
Integraspec	0121 635 5043
Insulwall	0844 576 6726
Thermohouse	020 8752 8013
Leathwaite	0845 680 8318
Cordek	01403 799600

LOFT CONVERSION COMPANIES (P.141)

Simply Loft	0800 917 7571
Absolute Lofts	0800 243 048
Econoloft	020 8777 1719
Landmark Lofts	. landmark-lofts.com
Moduloft	modulofts.co.uk
Trussloft	trussloft.co.uk
Eco Loft	0808 200 0504
Modern Attics	modernattics.com
Loft Masters	0800 9177 532

LOFT CONVERSION CONTACTS (P.141)

	L-T-1/
TeleBeam	telebeam.co.uk
Velux	velux.co.uk
Sharps	sharps.co.uk
Barnes of Ashburto	n01364 653613
Barbara Genda Bes	poke Furniture
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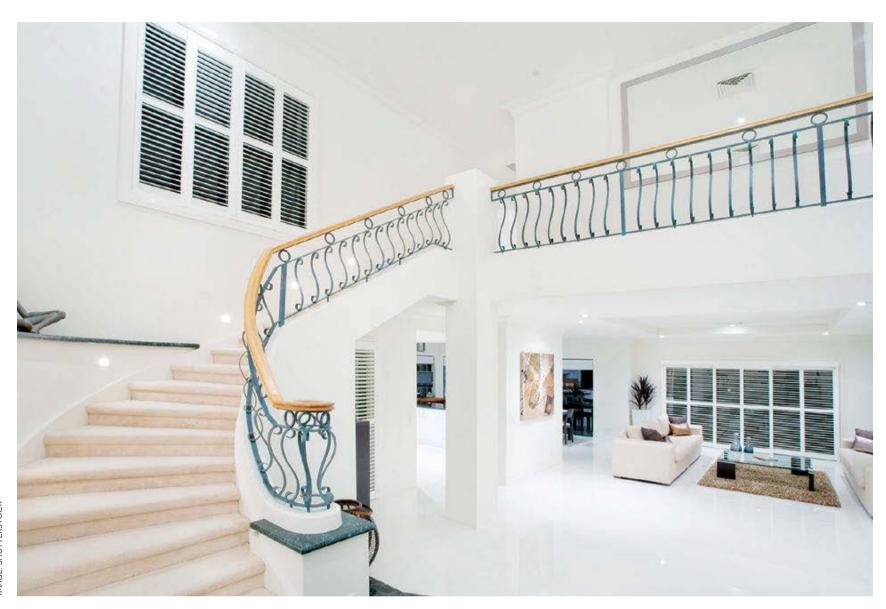
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MY BIG IDEA NO.2



The Galleried Landing

Designer Tony Holt shares one of his favourite design tricks

recommend a galleried landing. Homes with the stairs running up the wall with a room above the front door — usually of such tiny proportions that it only serves as a linen cupboard — feel very claustrophobic. The great thing about galleried landings however is the creation of a double-height volume which, even for homes with cramped ceiling heights, can allow the area to feel open and offer the illusion of added space.

Tony Holt is

o create a sense of drama in hallways I always

Galleried landings also present the perfect opportunity for introducing extra light into the home, which could be

achieved by introducing a rooflight or roof lantern above the stairs or even double-height glazing to the front for a well-defined entrance.

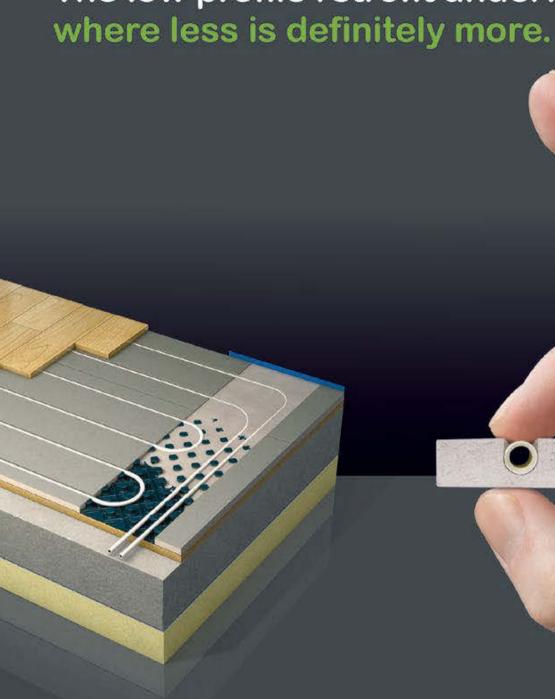


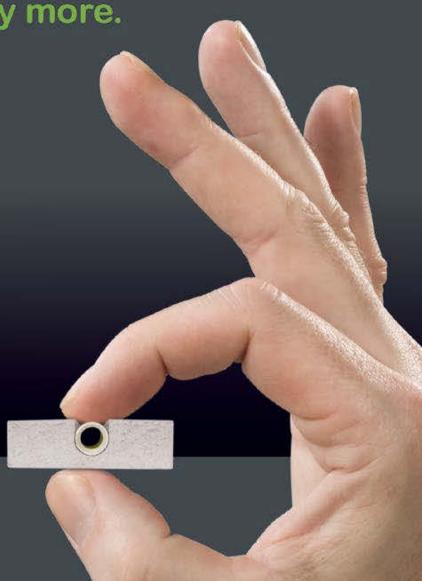
Tony Holt is a bespoke property designer and chartered architectural technologist (tonyholt-design.co.uk)

HOW TO DO IT

If you're renovating a property with a room above the hall which you could afford to lose, then this could allow you to create a double-height space. If you have a narrow hallway with rooms running alongside from which you can 'steal' a metre either side, then moving the walls to accommodate a galleried area is possible too, but you'll need to consult a structural engineer. Designing in a galleried landing will, of course, be easier on a new build.

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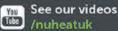


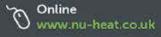
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